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STATE MEDICAL ASSOCIATION

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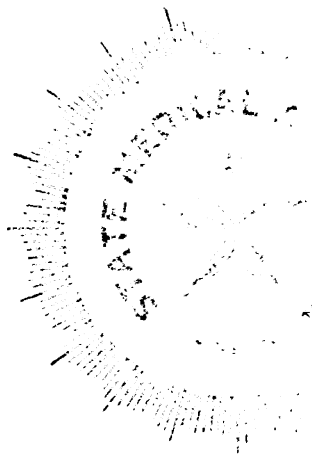
H. A. West, M. D., Sec'y,
Galveston, Texas.

J. D. OSBORN, M. D.

President Texas State Medical Association.
1892.



TRANSACTIONS

OF THE

TEXAS STATE

Medical Association.

TWENTY-FOURTH ANNUAL SESSION

HELD AT

TYLER, TEXAS,

APRIL 26, 27 AND 28, 1892.

GALVESTON:
J. W. BURSON-CO., PRINTERS AND PUBLISHERS.
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NOTE.

The Association does not hold itself responsible for the views enunciated in the papers and discussions published in this volume.

Minutes reported stenographically by Frank C. Pierce, Esq., Dallas, Texas.

H. A. West, M. D., *Secretary*,
2113 Market Street,
Galveston.

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OFFICERS FOR 1892-93.

PRESIDENT:

J. D. OSBORN, M. D. ..... Cleburne

FIRST VICE PRESIDENT:

T. J. BELL, M. D. ..... Tyler

SECOND VICE PRESIDENT:

F. M. PITTS, JR., M. D. ..... Hubbard

THIRD VICE PRESIDENT:

T. J. BENNETT, M. D. ..... Austin

SECRETARY:

H. A. WEST, M. D. ..... Galveston

TREASURER:

J. LARENDON, M. D. ..... Houston

JUDICIAL COUNCIL:

DR. J. C. J. KING, Waco ..... To serve one year
DR. W. P. POWELL, Willis ..... To serve one year
DR. H. L. FOUNTAIN, Bryan ..... To serve one year
DR. W. L. YORK, Decatur ..... To serve one year
DR. J. D. BURCH, Aurora ..... To serve two years
DR. J. C. LOGGINS, Ennis ..... To serve two years
DR. C. B. HUDSON, Alvarado ..... To serve two years
DR. O. I. HALBERT, Waco ..... To serve two years
DR. M. T. EMANUEL, Weatherford ..... To serve three years
DR. J. P. TUCKER, Overton ..... To serve three years
DR. B. A. FOWLER, Brownwood ..... To serve three years
DR. A. W. FLY, Galveston ..... To serve three years

SECTION ON PRACTICE OF MEDICINE, ETC.

J. C. Loggins, M. D., Chairman ..... Ennis
Clay Johnson, M. D., Secretary ..... Corsicana

SECTION ON OBSTETRICS AND DISEASES OF CHILDREN.

Irvin Pope, M. D., Chairman ..... Tyler
E. K. McKenzie, M. D., Secretary ..... Tyler

SECTION ON SURGERY, ETC.

A. B. Gardner, M. D., Chairman ..... Bellville
M. Smith, M. D., Secretary ..... Black Jack Grove

SECTION ON MEDICAL JURISPRUDENCE, ETC.

John Preston, M. D., Chairman ..... Terrell
B. M. Worsham, M. D., Secretary ..... Austin

SECTION ON STATE MEDICINE AND PUBLIC HYGIENE.

C. M. Rosser, M. D., Chairman ..... Dallas
J. S. Letcher, M. D., Secretary ..... Dallas

SECTION ON GYNECOLOGY.

J. F. Y. Paine, M. D., Chairman ..... Galveston
Geo. H. Lee, M. D., Secretary ..... Galveston

SECTION ON OPTHALMOLOGY AND OTOLOGY.

Geo. P. Hall, M. D., Chairman ..... Galveston
W. H. Baldinger, Secretary ..... Galveston

SECTION ON DERMATOLOGY, ETC.

R. W. Knox, M. D., Chairman ..... Houston
H. P. Cooke, M. D., Secretary ..... Galveston

SECTION ON ELECTRO-THERAPEUTICS.

(No nomination.)

PUBLICATION COMMITTEE.

H. A. West, M. D., Chairman ex officio ..... Galveston
J. F. Y. Paine, M. D. ..... Galveston
Hy. P. Cooke, M. D. ..... Galveston

COMMITTEE ON NECROLOGY.

J. W. Carhart, M. D , Chairman ..... Lampasas
T. D. Wooten, M. D. ..... Austin

COMMITTEE ON MICROSCOPY AND PATHOLOGY.

J. W. McLaughlin, M. D., Chairman.....Austin
W. R. Blaylock, M. D.....McGregor
T. J. Tyner, M. D. .....Austin

COMMITTEE ON STATE BOARD OF HEALTH.

R. M. Swearingen, M. D., Chairman .....Austin
(He to appoint four assistants.)

COMMITTEE ON ARRANGEMENTS.

H. A. West, M. D., Chairman.....Galveston

DELEGATES TO AMERICAN MEDICAL ASSOCIATION.

Dr. M. Lynch, Carroll's Prairie; Dr. B. M. Worsham, Austin; Dr. C. M. Rosser, Dallas; Dr. W. P. Burts, Fort Worth; Dr. W. A Duringer, Fort Worth; Dr. M. D. Knox, Hillsboro; Dr. J. W. Carhart, Lampasas; Dr. J. T. Fields, Fort Worth; Dr. H. A. West, Galveston.

TIME AND PLACE OF NEXT MEETING.

Galveston .....First Tuesday in May, 1893.

CONSTITUTION, BY-LAWS AND ORDINANCES

OF

THE TEXAS STATE MEDICAL ASSOCIATION.

CONSTITUTION.

ARTICLE I.

The name and style of this Association shall be the "TEXAS STATE MEDICAL ASSOCIATION."

ARTICLE II.

[At San Antonio, April, 1889, amended to read as follows:]

The objects of this Association shall be to organize the regular medical profession of the State in the most efficient manner possible; to encourage a high standard of professional qualification and ethics; to promote professional brotherhood; to labor for the advancement of State medicine, *i. e.*, of public hygiene; of medical education; of medical jurisprudence and public institutions for the sick and the infirm.

ARTICLE III.

[At San Antonio, April, 1889, amended as follows:]

SECTION 1. Every regularly educated man within the limits of this State, who is a graduate of a regular medical college in good standing, and who adopts and conforms to the Code of Ethics of the American Medical Association, shall be eligible to membership in this body; provided they are members in good standing of their respective county or district medical societies.

SEC. 2. In all cases where there exists no county medical organization (and the qualifications for membership are perfect in every other respect), this fact shall not be a bar to membership.

ARTICLE IV.

SECTION 1. The officers of this Association shall be one president, three vice presidents, one secretary and one treasurer.

SEC. 2. The president and vice presidents shall be elected for one year; the secretary and treasurer shall be elected, each, for five years, and every officer shall remain in his office until his successor is duly elected and installed.

ARTICLE V.

SECTION 1. It shall be the duty of the president to preside at all meetings of the Association, when present; to give the casting vote; to see that the rules of order and decorum are enforced in all deliberations of the body; to sign the approved proceedings of each meeting, and to approve such orders as may be drawn upon the treasurer for expenditures ordered by the Association.

SEC. 2. It shall be the duty of the first vice president to preside in the absence of the president, and in the absence of the president and first vice president the second vice president shall preside, and in the absence of the president, first and second vice presidents, the third vice president shall preside.

SEC. 3. In the absence of the president and all the vice presidents the Association shall, by ballot, elect one of its members to preside pro tem.

SEC. 4. It shall be the duty of the secretary to keep a true and correct record of the proceedings of each meeting, preserve all books, papers and things belonging to the archives of the Association, attest all orders drawn upon the treasurer for moneys appropriated by the Association, keep the accounts of the Association with its members, keep a register of the members, the dates of their admission and places of residence. He shall collect all moneys due from the members and pay the same to the treasurer, taking his receipt therefor.* He shall attend all committees that may be appointed by the Association with such documents as may be necessary for reference; report such unfinished business of previous meetings as may appear on his books requiring action, and attend to such other business as the Association may direct. He shall also supervise and conduct all the correspondence of the Association.

SEC. 5. It shall be the duty of the treasurer to receive all moneys delivered to him by the secretary, passing his receipt for the same, and to pay moneys endorsed by the president and attested by the secretary, and, if required, to give bond for the faithful performance of the duties of his office.

ARTICLE VI.

Vacancies occurring in the offices of the Association shall be filled by appointment by the president. And he shall have the appointment of all the committees not otherwise provided for.

*Collection of dues and all matters of finance relegated to the treasurer. See report of judicial council, Waco meeting, second day.

ARTICLE VII.

County medical associations shall be entitled to two delegates to the meetings of this Association for every ten members comprising their societies, and one for every additional five members, and shall have two votes upon all questions; and all medical colleges in the State, holding charters from the State, with seven professors, shall be entitled to two votes; and no member shall be allowed to vote who is not a delegate of some association or medical college, except such members live in a county where no association exists, said county delegates being entitled to one vote.

[The judicial council interprets the meaning of Article VII, of the Constitution, as follows: "Each member of the Texas State Medical Association, who is in good standing, shall be entitled to one vote, and if he be also a delegate from a medical society or college, properly authorized, shall be entitled to an additional vote." County medical associations shall be entitled to send two delegates for the first ten members, and one for each additional five members. Medical colleges conforming to the ethics governing this Association, chartered by the State, and having seven or more professors, shall be entitled to two delegates.—Proceedings Sixteenth session Texas State Medical Association]

ARTICLE VIII.

This Constitution shall immediately take effect from its adoption.

BY-LAWS.

ARTICLE I.

The Texas State Medical Association shall meet annually, at such time and place as may be determined by the majority of those members attending the previous meeting.

ARTICLE II.

Fifteen members, or any number over, shall constitute a quorum for business.

ARTICLE III.

The president shall call the meeting to order, cause the secretary to read the proceedings of the previous meeting, which, after approval, shall be adopted.

ARTICLE IV.

In case there be no quorum the meeting shall adjourn from day to day until such quorum be had.

ARTICLE V.

The fee of admission shall be $5.00, United States currency, and the annual dues of each member $2.50, United States currency.

Amendment adopted Seventh Annual Session, 1875, on motion of Dr. M. A. Taylor:

Resolved, That the by-laws of the State Medical Association be so changed as to tax the members of the Association the sum of $5.00, instead of $2.50, per annum, and that each member of the various county organizations be taxed the sum of $1.00 per annum.*

ARTICLE VI.

The usual parliamentary rules governing deliberative bodies shall govern the business workings of this Association.

ARTICLE VII.

All questions of business before this Association shall be determined by a majority of the votes present, except as to censure or expulsion of a member, in which case a two-thirds vote shall be required.

ARTICLE VIII.

It shall be the duty of the president to deliver, at each annual meeting of this Association, an address, and, in addition, the Association shall elect by ballot, one member to read an essay upon some medical subject of his own selection.

ARTICLE IX.

A committee of one member from each county represented shall constitute a committee on nominations for officers and place of meeting. Said committee shall report action one day prior to adjournment.

ARTICLE X.

No member of this Association, or delegate, shall absent himself from a meeting of this Association without special permission from the president, or from the session without the consent of the Association; the sense of the Association to be taken by vote.

*The per capita tax of $1.00 on County Societies was repealed at Fort Worth, April, 1890.

ARTICLE XI.

The secretary of the Association shall receive, as a compliment, at each annual session, a draft from the president upon the treasurer for the sum of two hundred dollars for valuable services rendered the Association; said order to be paid by the treasurer; and he shall also be allowed to draw upon the treasurer, as usual, for expenses incident to the office.

ARTICLE XII.

It shall be the duty of the president, three months prior to each annual meeting of this Association, to notify, by circular, the profession of the State and county organizations throughout the State and urge attendance.

JUDICIAL COUNCIL.

A council consisting of twelve members shall be appointed by the nominating committee, whose duty it shall be to take cognizance of and decide all questions of an ethical or judicial character that may arise in connection with the Association. Of the twelve members of the council first appointed the four first named on the list shall hold office for one year, the second four named shall hold office two years and the third four named shall hold office three years; so that four new members shall be appointed each year, who shall hold office three years.

The said council shall organize by choosing a president and a secretary, and shall keep a permanent record of its proceedings. The decisions of said council, on all matters referred to it by the Association, shall be final, and shall be reported to the Association at the earliest practicable moment.

All questions of a personal character, including complaints and protests, and all questions on credentials, shall be referred at once, after the report of the committee of arrangements, or other presentation, to the judicial council, and without discussion.

[Amended April, 1889, at San Antonio, as follows:]

"All questions of a personal character, including complaints and protests, and all questions on credentials shall be referred at once to the judicial council, and without discussion, whose decisions shall be absolute and final on all questions of unscientific character of whatever nature; provided an appeal is not taken to the judicial council of the American Medical Association; in which case it shall be the duty of the general secretary to furnish the secretary of the higher council with a complete and authenticated transcript of the proceedings of the lower council."

SECTION 1. It shall be the duty of the judicial council, on all questions involving a penalty, after having arrived at a decision in any given case

as to the guilt or innocence of any member against whom charges of whatsoever nature may have been preferred, to assess the grade of punishment on the one hand, or declare an acquittal on the other, and report such action to the Association at its earliest convenience for its information, and it is hereby made the duty of the general secretary to record said report as part of the minutes of this Association.

SEC. 2. All questions based upon real or supposed professional or personal grievance must be adjudicated by the county or district societies of which the parties may be members, and it is hereby declared that all such questions are beyond the jurisdiction of the judicial council; provided no appeal from the lower council appears.

SEC. 3. In all questions of personal or professional character arising between parties, either or both of whom reside in a county or counties where no recognized medical society exists, such cause shall fall under the jurisdiction of the nearest county or district medical association.

SECTIONS.

The general meeting of the Association shall be restricted to the morning session; and the afternoon sessions, commencing at three o'clock, shall be devoted to the hearing of reports and papers, and their consideration, in the following sections:

1. Practice of Medicine, Materia Medica, and Physiology.
2. Obstetrics, and Diseases of Children.
3. Surgery and Anatomy.
4. Medical Jurisprudence, Chemistry and Psychology.
5. State Medicine and Public Hygiene.
6. Gynecology.
7. Ophthalmology and Otology.
8. Dermatology and Medical Botany.
9. Electro-Therapeutics.

The chairman and secretary of the several sections shall, like other officers of the Association, be nominated by the nominating committee of one member from each county represented at the meeting, and elected by a vote on a general ticket. They shall hold their office until the close of the proper business of the annual meeting next succeeding their election, and until their successors are appointed.

The section on State Medicine and public Hygiene shall be composed of one member from each county, representing, as far as practicable, the county board of health. The officers of this section to be also designated by the committee on nominations.

The chairmen of the several sections shall prepare and read in general sessions of the Association, papers on the advances and discoveries of the past year in the branch of science included in their respective

sections; the reading of such papers not to occupy longer than forty minutes for each.

Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the secretary to whom such papers are sent to examine them with care, and, with the advice of the chairman of his section, to determine the time and order of their presentation, and to give due notice of the same; and, after their full examination and discussion by the section, they shall be sent to the permanent secretary of the Association.

No paper shall be read before either of the sections, the reading of which occupies more than twenty minutes. Such papers shall be referred by the section to sub-committees especially appointed for their examination. The sub-committees shall be allowed thirty days for such examination; at the end of which time they shall forward the papers to the committee of publication with such recommendations as they may deem proper. The authors of such papers, however, may read abstracts before the section within the allotted twenty minutes. No member shall address the section more than once upon the same subject, nor speak longer than fifteen minutes, without unanimous consent. All papers presented directly to the Association, and other matters, may, at the discretion of the Association, be referred to the various sections for their consideration and report.

STANDING COMMITTEES.

The following are the standing committees of the Association, to be filled by the committee on nominations, and to report at the next annual meeting subsequent to their appointment, viz: Committee of arrangements, committee of publication, *committee on prize essays, committee on microscopy and pathology, and committee on Texas State medical necrology.

The committee of publication shall append to each volume of the Transactions hereafter published a copy of the Constitution, By-Laws, Code of Ethics of the Association, and a complete list of all members in full fellowship, and their respective places of abode.

It shall print conspicuously at the beginning of each volume of the Transactions the following disclaimer, viz: "The Texas State Medical Association, although formally accepting and publishing the reports of the various standing committees, holds itself wholly irresponsible for the opinions, theories or criticisms therein contained, except when otherwise decided by special resolution."

*Repealed at San Antonio, April, 1889.

The committee on Texas State medical necrology shall consist of one member for each county represented in the Association, whose duty it shall be to procure memorials of the eminent and worthy dead among the distinguished physicians of their respective counties, and transmit them to the chairman of this committee on or before the first of April of each and every year.

THE PUBLICATION OF PAPERS AND REPORTS.

No paper or report shall be entitled to publication in the volume, for the year in which it shall be presented to the Association, unless it be placed in the hands of the committee of publication on or before the first day of July. It must also be so prepared as to require no material alteration or addition at the hands of its author.

Authors of papers are required to return their proofs within two weeks after reception; otherwise they will be passed over and omitted from the volume.

The committee of publication shall have full discretionary power to omit from the published Transactions, in part or in whole, any paper that may be referred to it by the Association or either of the sections, unless specially instructed to the contrary by vote of the Association.

ORDINANCES.

[The following are extracts from ordinances passed at different meetings of the Association:]

Resolved, That this Association recognizes specialities as proper and legitimate fields of practice.

Resolved, That specialists shall be governed by the same rules of professional etiquette as have been laid down for general practitioners.

Resolved, That it shall not be proper for specialists publicly to advertise themselves as such, or to assume any title not specially granted by a regularly chartered college.

Resolved, That private handbills addressed to members of the medical profession, or by cards in medical journals, calling the attention of professional brethren to themselves as specialists, be declared in violation of the Code of Ethics of the American Medical Association. (*Vide Trans.*, Vol. XX, p. 28.)

WHEREAS, The proper construction of Article IV, Section I, Code of Ethics, American Medical Association, having been called for relative to

consultation with irregular practitioners who are graduates of regular schools:

Resolved, That said Article IV, Section 1, Code of Ethics, excludes all such practitioners from recognition by the regular profession. (*Vide Trans.*, Vol. XX, p. 30.)

Resolved, That members of the medical profession who in any way aid or abet the graduation of medical students in irregular or exclusive systems of medicine, are deemed thereby to violate the spirit of the Ethics of the American Medical Association. (*Vide Trans.*, Vol. XXVI, p. 48.)

WHEREAS, Persistent representations have been and still are being made concerning certain provisions of the Code of Ethics of this Association, by which many in the community, and some even in the ranks of the profession, are led to believe those provisions exclude persons from professional recognition simply because of differences of opinion; therefore,

1. *Resolved*, That clause first of Article VI, in the National Code of Medical Ethics, is not to be interpreted as excluding from professional fellowship, on the ground of difference in doctrine or belief, those who in other respects are entitled to be members of the regular medical profession. Neither is there any other article or clause of the said Code of Ethics that interferes with the exercise of the most perfect liberty of individual opinion and practice.

2. *Resolved*, That it constitutes a voluntary disconnection or withdrawal from the medical profession proper to assume a name indicating to the public a sectarian, or exclusive system of practice, or to belong to an association or party antagonistic to the general medical profession.

3. *Resolved*, That there is no provision in the National Code of Medical Ethics in any wise inconsistent with the broadest dictates of humanity, and that the article of the Code which relates to consultations can not be correctly interpreted as interdicting, under any circumstances, the rendering of professional services whenever there is a pressing or immediate need of them. On the contrary, to meet the emergencies occasioned by disease or accident, and to give a helping hand to the distressed without unnecessary delay, is a duty fully enjoined on every member of the profession, both by the letter and the spirit of the entire Code.

But no such emergencies or circumstances can make it necessary or proper to enter into formal professional consultations with those who have voluntarily disconnected themselves from the regular medical profession in the manner indicated by the preceding resolution. (*Vide Journal of the American Medical Association*, May 16, 1885.)

Resolved, That the several sections of this Association be requested, in future, to refer no paper or reports to the committee of publication,

except such as can be fairly classed under one of the three following heads, viz:

1. Such as may contain and establish *positively* new facts, modes of practice, or principles of real value.

2. Such as may contain the results of well-devised original experimental researches.

3. Such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance.

Resolved, That the several sections be requested, in future, to refer all such papers as may be presented to them for examination by this Association, that contain matter of more or less value, yet cannot be fairly ranked under either of the heads mentioned in the foregoing resolution, back to their authors, with the recommendation that they be published in such regular medical periodicals as said author may select, with the privilege of placing at the head of such papers: "Read to the.....Section of the Texas State Medical Association on the.....day of .....189.."

Resolved, That at the future meetings of the Texas State Medical Association no report of standing committees, or communications, shall be read before the Association which exceeds twenty pages of letter paper. (*Vide Trans.*, Seventh An. Sess., p. 33.)

Resolved, That all members of this Association in arrears for dues, over three years, shall stand suspended, and their names be dropped from the roll; the same to be reinstated at any time by paying up back dues. It shall be the duty of the secretary to notify all members behind for dues, immediately after the adjournment of this body, and request immediate payment. (*Vide Trans.*, Eighth An. Sess., p. 21.)

Resolved, That county societies be requested to furnish a list of physicians in the county, as well as of members; to give population of county, number of births, deaths, cause of death, age at death, sex and race; diseases that have prevailed, localities, with a description of the latter, in order to ascertain, if possible, the causes of disease; also, an abstract of contents of papers read, an abstract of discussions, surgical operations and results. (*Vide Trans.*, Eighth An. Sess., p. 41.)

The following resolution, by Dr. Daniel, was adopted at the Dallas meeting, April, 1886:

Resolved, That all members whose names have been dropped from the roll for non-payment of dues, in accordance with the Constitution and By-Laws, may be reinstated upon payment of the admission fee and the current year's dues, in the same manner that new members are admitted. (*Vide Trans.*, Eighteenth An. Sess.)

The following resolutions were adopted at the Austin meeting of the Association, April 28, 1889: (*Trans.*, Nineteenth An. Ses-.)

By Dr. J. R. Johnson:

Resolved, That the publishing committee be hereby authorized to reject any paper that in their judgment should not be published in the State Medical Transactions, independent of previous instructions.

By Dr. H. L. Parsons:

Resolved, That hereafter all moneys arising from printing, or any other source, and coming into the hands of the secretary or other officers of this Association, shall be paid into the hands of the treasurer, and credited to the general fund of the Association.

Resolved, That in future no advertisements be inserted in the volumes of Transactions of the Association; and that $300 each year be set aside from the treasury as compensation to the publishing committee for their time and labor in editing and publishing the Transactions.

Adopted at San Antonio, April, 1889:

Resolution repealing the clause relating to prize essays, and the special ordinance providing for a prize of $100 for best papers, etc.

Also, by Dr. J. H. Sears:

Resolved, That in future no paper read before this Association and referred to publishing committee shall be published in any medical journal prior to its appearance in the Transactions, and any paper so published shall not be entitled to publication in the Transactions thereafter.

The following resolutions were adopted at the Fort Worth meeting, April, 1890:

Dr. Ghent offered the following resolution, which, on motion, was adopted:

Resolved, That the secretary be instructed to procure the names, as far as possible, of all the deceased members of the Texas State Medical Association, from its organization to the present time, who were in good standing at the time of death, with the postoffice and county of each, and the year admitted as members and the year of death, and have the same published at the close of our next yearly Transactions under the caption "In Memoriam."

WHEREAS, The judicial council find great difficulty in the thorough investigation of the fitness of applicants for membership in this Association:

Resolved, That in future every applicant must without fail accompany his application with his diploma or other acceptable documentary evidence of graduation. R. H. HARRISON, Chairman.

O. EASTLAND, Secretary.

Dr. J. W. Carhart offered a resolution to the effect that the Association is remiss in its duty with regard to deceased members, and that the president be required to name a time on the first day of the session each year

for memorial services to be held for deceased members, said time not to exceed one hour, and such services to be the order of the day and take precedence over all business.

Dr. Osborne moved as amendment to Dr. Carhart's resolution that a page in the Transactions be devoted each year to a record of deceased members.

Dr. C. J. C. King moved to amend by making it "a page or more, as required."

Adopted as amended.

Dr. H. K. Leake offered the following resolution:

Resolved, That a committee on microscopy and pathology be added to the standing committees of this Association, to the end that these branches of study be thereby fostered, and the wants of the profession in these directions met by competent investigators. Further, that such committee be known as the committee on microscopy and pathology of the Texas State Medical Association, and shall consist of three members, to be nominated by the nominating committee. Adopted.

The nominating committee having failed to name said committee, Dr. H. A. West moved that the committee consist of Drs. Geo. Dock, chairman; E. J. Ward and J. W. McLaughlin. The motion was adopted.

The following resolution, offered by Dr. J. H. Sears, was adopted:

WHEREAS, Our efficient treasurer has served us for nineteen years, the first ten years of which was without compensation; and

WHEREAS, There is no provision in the By-Laws for any remuneration for this officer, but at each meeting a small appropriation has generally been made:

Resolved, That the sum of $150 be set aside for his salary each year out of the funds of the Association, and that $10 be allowed him for postage each year, as heretofore.

Dr. H. A. West offered the following resolution:

WHEREAS, It has become notorious that some chairmen of sections, duly elected, fail entirely in the performance of the duty incumbent on them, both in preparing reports and in absenting themselves from the meeting of the Association; and

WHEREAS, An important By-Law of the Constitution requiring the secretaries of the various sections to be notified as to the titles, or have the papers sent to the secretary at least one month before the meeting which is to act upon them, and to give due notice of the same; and

WHEREAS, The general secretary is unable fully to report the discussions occurring in the section work, which ought to constitute the most interesting part of the proceedings:

Resolved, That every chairman-elect shall notify the general secretary, at least one month after election, of his acceptance, or otherwise, of the

position. Should any chairman fail to furnish such notice, the president shall then appoint a new chairman.

Resolved, That this Association *insist* upon the literal performance of the requirements of the By-Laws referring to the transmission of papers to the secretaries of sections, and publication thereof.

Resolved, That the general secretary be authorized and empowered to employ a competent stenographer and typewriter to assist in reporting the discussions and proceedings of the Association at each meeting.

Adopted.

MEMBERS PRESENT AND REGISTERED.

NAME.	POSTOFFICE.	COUNTY.
Ashton L.	Dallas	Dallas
Baldinger W. H.	Galveston	Galveston
Bass J. D.	Pittsburg	Camp
Becton E. P.	Sulphur Springs	Hopkins
Bell T. J.	Tyler	Smith
Bennett T. J.	Austin	Travis
Benton Geo. W.	Woodbury	Hill
Black J. S.	Mount Pleasant	Titus
Blalock W. R.	McGregor	McLennan
Blyther W. H.	Mount Pleasant	Titus
Bowers S.	Brenham	Washington
Bramlett Albt.	Decatur	Wise
Brooks W. B.	Dallas	Dallas
Buie J.	Hillsboro	Hill
Burch J. D.	Aurora	Wise
Burroughs J. J.	Houston	Harris
Burroughs Sam R.	Raymond	Leon
Burts W. P.	Fort Worth	Tarrant
Butler S. L.	Omen	Smith
Callen W. P.	Warren	Tyler
Capps E. D.	Fort Worth	Tarrant
Carhart J. W.	Lampasas	Lampasas
Church B. F.	Terrell	Kaufman
Clark I. E.	Schulenberg	Fayette
Coleman P. C.	Colorado	Mitchell
Collier E. S.	Wills Point	Van Zandt
Conerly T. W.	Kildare	Cass
Cravens M. H.	Arlington	Tarrant
Cunningham J. L.	Fort Worth	Tarrant
Davis T. P.	Canton	Van Zandt
Dean J. F.	Hornsby	Travis
Dial H. C.	Big Sandy	Upshur
Dumas W. P.	Terrell	Kaufman
Earps J. H.	Corsicana	Navarro
Emanuel M. T.	Weatherford	Parker

NAME.	POSTOFFICE.	COUNTY.
Embry Jno. A	Decatur	Wise
Evans W. T	Jewett	Leon
Field J. T	Fort Worth	Tarrant
Fitts J. O	Big Sandy	Upshur
Fitts O. A	Hawkins	Wood
Ford F. C	Nacogdoches	Nacogdoches
Foscue G. B	Waco	McLennan
Fowler B. A	Brownwood	Brown
Fry James M	Elmo	Kaufman
Gardner A. B	Belleville	Austin
Gaston J. W	Troupe	Smith
Goodman W. J	Tyler	Smith
Gray J. I. L	Mexia	Limestone
Griffith L. E	Terrell	Kaufman
Henderson Taylor	Belton	Bell
Hilgartner H. L	Austin	Travis
Holt C. J	Kilgore	Gregg
Johnson Clay	Corsicana	Navarro
Kennedy N. B	Hillsboro	Hill
Kimmins R L	Iredell	Bosque
King J. C. J	Waco	McLennan
Knox M D	Hillsboro	Hill
Knox R. W	Houston	Harris
Lacy W. S	Troupe	Smith
Lancaster W. H	Moulton	Lavaca
Larkin Percy	Athens	Henderson
Larendon J	Houston	Harris
Leak E. E	Centre	Shelby
Lee W. B	Chattanooga, Tenn.	
Litten Frank	Austin	Travis
Litten J. M	Austin	Travis
Loggins J. C	Ennis	Ellis
Lynch M. C	Carroll's Prairie	Hopkins
Martin T. R	Kyle	Hays
May J. L	Stephensville	Erath
McCrary E. R. N	Swan	Smith
Miller T. A	Corsicana	Navarro
Monday W. H	Terrell	Kaufman
Montgomery D. W	Concord	Leon
Moody R. E	Sweetwater	Nolan
Motley Jno. G	Overton	Rusk
Newland W. B	Gatesville	Coryell

NAME.	POSTOFFICE.	COUNTY.
Osborn J. D	Cleburne	Johnson
Paine J. F. Y	Galveston	Galveston
Perkins A. N	Sabine Pass	Jefferson
Pitts F M , Jr	Hubbard	Hill
Pope Irvin	Tyler	Smith
Powell W. P	Willis	Montgomery
Preston John	Terrel	Kaufman
Pugh W. W	Rusk	Cherokee
Raines C. B	Mineral Wells	Palo Pinto
Reuss J. H	Cuero	De Witt
Richardson D R	Henderson	Rusk
Robuck T. B	Italy	Ellis
Rosser C. M	Dallas	Dallas
Scarborough D. C	Golden	Wood
Scott Walter	Tyler	Smith
Sears J. H	Waco	McLennan
Selman B. E	Rogers' Prairie	Leon
Shirley D. G	Tyler	Smith
Smith C. A	Tyler	Smith
Smith C. D	White House	Smith
Smith M	Black Jack Grove	Hopkins
Smith Q. C	Austin	Travis
Stallcup T. H	Jefferson	Marion
Starley W. F	Tyler	Smith
Steiner Ralph	Austin	Travis
Spring J. V	San Antonio	Bexar
Swindall F. W	Alba	Wood
Tate H. L	Lindale	Smith
Terrell J. R	Waco	McLennan
Tucker J. P	Overton	Rusk
Vaughan B. H	Vaughan	Hill
Waltser E. T	Trinity	Trinity
Watkins W. A	Kemp	Kaufman
Weathered A. J	Osceola	Hill
West H. A	Galveston	Galveston
White F. S	Austin	Travis
Wier R. R	Itasca	Hill
Wilkes W. H	Waco	McLennan
Williamson R. A	Woodbury	Hill
Worsham B. M	Austin	Travis

NEW MEMBERS 1892.

NAME.	POSTOFFICE.	COUNTY.
Ashton L	Dallas	Dallas
Baldinger W. H	Galveston	Galveston
Bass T. B	Terrell	Kaufman
Benton Geo. W	Woodbury	Hill
Bramlett Albt. C	Decatur	Wise
Butler S. L	Omen	Smith
Callen W. P	Warren	Tyler
Capps E. D	Fort Worth	Tarrant
Collier E. S	Wills Point	Van Zandt
Cravens M. H	Arlington	Tarrant
Davis T. P	Canton	Van Zandt
De La Garza M. M	San Antonio	Bexar
Earps J. H	Corsicana	Navarro
Embry John A	Decatur	Wise
Ferrell J. R	Waco	McLennan
Gray J. I. L	Mexia	Limestone
Hilgartner H. L	Austin	Travis
Holt C. I	Kilgore	Gregg
Johnson Clay	Corsicana	Navarro
Lynch M. C	Carroll's Prairie	Hopkins
Mathews C. O	Belden	Morris
McKenzie E. K	Tyler	Smith
Monday W. H	Terrell	Kaufman
Motley John G	Overton	Rusk
Newland W. B	Gatesville	Coryell
O'Bryan A. F	Longview	Gregg
Pugh W. W	Rusk	Cherokee
Richardson D. P	Henderson	Rusk
Robuck T. B	Italy	Ellis
Sellman B. E	Rogers' Prairie	Leon
Shirley D. G	Tyler	Smith
Smith M	Black Jack Grove	Hopkins
Swindall F. W	Alba	Wood
Tate H. L	Lindale	Smith
White W. P	Henderson	Rusk

HONORARY MEMBERS.

NAME.	POSTOFFICE.	STATE.
Bozeman Nathan	New York	New York
Cardwell John C	Boylston and Exeter Sts., Boston	Massachusetts
Heard T. J	Galveston	Texas
Keller Jas. M	Hot Springs	Arkansas
Love I. N	St. Louis	Missouri
Lydstone Frank G	Chicago	Illinois
McGuire Hunter	Richmond	Virginia
McMurtry Louis S	Louisville	Kentucky
Meyer J. M	Danville	Kentucky
Milliken Sam'l E	New York	New York
More T. Madden	55 Merrion Square, Dublin	Ireland
Noyes J. F	585 Broad Street, Providence	Rhode Island
Osborne T. C	Cleburne	Texas
Price Joseph	20 & Hamilton Sts. Philadelphia	Pennsylvania
Raines C. B	Mineral Wells	Texas
Reed R. Harvey	Mansfield	Ohio
Smith Albert H	Philadelphia	Pennsylvania
Souchon Edmund	New Orleans	Louisiana
Thompson W. G	49 E. Thirtieth St. New York	New York
Wyeth John A	New York	New York
Yandell David W	Louisville	Kentucky

ORDINARY MEMBERS.

NAME.	POSTOFFICE.	COUNTY.	ELECTED.
Abney O. L	Victoria	Victoria	1888
Adams W. A	Fort Worth	Tarrant	
Akard G. W	Springtown	Parker	1890
Alexander C. M	Coleman	Coleman	1887
Alexander W. P	Cleburne	Johnson	1890
Allen Frank	Belton	Bell	
Anderson G. M	Tanglewood	Lee	
Archer W. A	Houston	Harris	1872
Armstrong A. M	Crawford	McLennan	
Ashton L	Dallas	Dallas	1892
Atkinson R	San Marcos	Hays	1889
Baldinger W. H	Galveston	Galveston	1892
Baldwin A. P	Tyler	Smith	1891
Barham S. H	Nacogdoches	Nacogdoches	
Barker W. L	Waco	McLennan	
Barnes W. T	Rockwall	Rockwall	
Barnwell J. J	Webberville	Travis	1891
Bass J. D	Pittsburg	Camp	1883
Bass T. B	Terrell	Kaufman	1892
Beall E. J	Fort Worth	Tarrant	1874
Becton E. P	Sulphur Springs	Hopkins	1876
Bell T. J	Tyler	Smith	
Benbrook J. T	Rockwall	Rockwall	1887
Bennett Edward	San Antonio	Bexar	1887
Bennett T. J	Austin	Travis	1884
Benton Geo. W	Woodbury	Hill	1892
Berg L. M	Laredo	Webb	1890
Berry D	San Antonio	Bexar	1889
Birdsong M. J	Greenville	Hunt	1882
Black C. C	Round Rock	Williamson	
Blalock W. C	Kossee	Limestone	1886
Blalock W. R	McGregor	McLennan	1889
Blewett W. J	Beaumont	Jefferson	1891
Bobo C. S	Aurora	Wise	1884
Boggs A. D	Marquez	Leon	1889

NAME.	POSTOFFICE.	COUNTY.	ELECTED.
Bond Geo. D	Hillsboro	Hill	1890
Borders J. M	Fort Worth	Tarrant	1886
Boren A. W	San Augustine	San Augustine	1886
Bowers S	Brenham	Washington	
Bramlett Albt. C	Decatur	Wise	1892
Braunagle Julius	San Antonio	Bexar	1889
Bristoe B. W	Flatonia	Fayette	1885
Brittain B. F	Jacksonville	Rusk	
Brooks W. B	Dallas	Dallas	1882
Brown A. P	Fort Worth	Tarrant	1876
Brown B. J	Crawford	McLennan	
Brown H. W	Waco	McLennan	
Brown W. E	Gatesville	Coryell	1890
Buie J	Hillsboro.	Hill	1889
Bundy Z. T	Milford	Ellis	1890
Burch J. D	Aurora	Wise	1890
Burger W. M	Cornelia	Armstrong	1891
Burleson J. M	Lampasas	Lampasas	1886
Burroughs J. J	Houston	Harris	
Burroughs Sam R	Raymond	Leon	1876
Burts W. P	Fort Worth	Tarrant	1878
Butler S. L	Omen	Smith	1892
Buyers W			
Callen W. P	Warren	Tyler	1892
Capps E. D	Fort Worth	Tarrant	1892
Carhart J. W	Lampasas	Lampasas	1886
Carpenter Wm. B	Mart	McLennan	1891
Carrington S. E	Franklin	Robertson	1889
Carter J. L	Dallas	Dallas	1891
Cartright J. W	Amarillo	Potter	1886
Castleton E. L. E	Houston	Harris	1886
Chandler J. N	Glen Rose	Somervell	1891
Chilton R. H	Dallas	Dallas	1881
Christian G. W	Burnet	Burnet	1886
Church B. F	Terrell	Kaufman	1889
Clark I. E	Schulenberg	Lavaca	1885
Clark Eugene	Lockhart	Caldwell	
Clay C. L	Moody	McLennan	1886
Claywell D. W	Troy	Bell	1884
Clopton A. G	Jefferson	Marion	1874
Colby G. B	Cleburne	Johnson	1886
Coleman P. C	Colorado City	Mitchell	1885

NAME.	POSTOFFICE.	COUNTY.	ELECTED.
Conerly T. W	Kildare	Cass	1883
Collier E. S	Wills Point	Van Zandt	1892
Cooke H. P	Galveston	Galveston	1885
Cooper St. Cloud	San Antonio	Bexar	1890
Cowling Jas	Houston	Harris	
Cravens M. H	Arlington	Tarrant	1892
Crow C. J	Coryell City	Coryell	1891
Crump J. G	St. Jo	Montague	1885
Cummings J	Austin	Travis	1875
Cunningham J. L	Fort Worth	Tarrant	1780
Cunningham Sam	Elgin	Bastrop	1887
Cunningham W. M	Bastrop	Bastrop	1891
Cupples Geo	San Antonio	Bexar	
Curtis A. M	Waco	McLennan	
Daniel F. E	Austin	Travis	1882
Daniels J. G	Tyler	Smith	1886
Darr H. H	Caldwell	Burleson	1877
Davidson S. D	Reagan	Falls	
Davis J. A	Austin	Travis	1890
Davis T. P	Canton	Van Zandt	1892
Dean J. F	Hornsby	Travis	1889
De Causey M	Sealy	Austin	1889
De La Garza M. M	San Antonio	Bexar	1892
Denton A. N	Austin	Travis	
Dial J. J	Sulphur Springs	Hopkins	
Dillard J. L	Richmond	Fort Bend	1888
Doak A. V	Taylor	Williamson	
Dock Geo	Ann Arbor	Michigan	1889
Dollar J. M	Burlington	Milam	1889
Douglass A. M	Osceola	Hill	1881
Drake Wm. M	Abbott	Hill	1886
Dudley H. W	Hillsboro	Hill	1882
Duringer W. A	Fort Worth	Tarrant	1887
Eads B. F	Marshall	Harrison	
Eagon S	Dallas	Dallas	
Earps J. H	Corsicana	Navarro	1892
Eastland Orin	Wichita Falls	Wichita	1882
Emanuel M. T	Weatherford	Parker	
Embry John A	Decatur	Wise	1892
Evans W. T	Jewett	Leon	
Fennell J. W	Seguin	Guadalupe	
Fennell J. D	Seguin	Guadalupe	1887

NAME.	POSTOFFICE.	COUNTY.	ELECTED.
Ferris J. H	Henrietta	Clay	1886
Ferrell J. R	Waco	McLennan	1892
Fields J. T	Fort Worth	Tarrant	1872
Fields J. C	Denison	Grayson	
Fisher F. K	Galveston	Galveston	1880
Fitzpatrick J. B	Killeen	Bell	
Fleming W. F	Georgetown	Williamson	1889
Fly A. W	Galveston	Galveston	1877
Fly J. M	Leesville	Gonzales	1889
Ford F. C	Nacogdoches	Nacogdoches	
Ford J. F	Decatur	Wise	1884
Fort J. M	Paris	Lamar	1890
Foscue G. B	Waco	McLennan	1891
Fountain H. L	Bryan	Brazos	1889
Fouts J. J	Gonzales	Gonzales	1891
Fowler B. A	Llano	Llano	1891
Frazier J. M	Morgan	Bosque	1879
Frazier J. R	Morgan	Bosque	1891
Fry J. M	Elmo	Kaufman	1890
Gale Robt	Dallas	Dallas	1890
Gallaher J. W	Graham	Young	1890
Gardner A. B	Denison	Grayson	1887
Gardner A. B	Bellville	Austin	1880
Garwood A	New Braunfels	Comal	1887
Gentbruck R	Houston	Harris	1889
Ghent H. C	Belton	Bell	1877
Gibson B, F	Midway	Madison	1889
Gibson J. E	McKinney	Collin	1889
Gilbert S. L	Sulphur Springs	Hopkins	1886
Gilchrist J. E	Gainesville	Cook	1884
Gilsen F. J	Calvert	Robertson	1887
Goodman W. J	Tyler	Smith	
Gracey J. A	Waxahachie	Ellis	1890
Grammer R. B	Fort Worth	Tarrant	1884
Gray A. J	Ben Wheeler	Van Zandt	1887
Gray Frank	Fort Worth	Tarrant	1886
Gray J. I. L	Mexia	Limestone	1892
Gulic J. W	Corsicana	Navarro	1886
Gwin C. L	Galveston	Galveston	1860
Hadra B. E	Galveston	Galveston	1873
Halbert O. I	Waco	McLennan	1881
Hall Geo. P	Galveston	Galveston	

NAME.	POSTOFFICE.	COUNTY.	ELECTED.
Harris D	Whitney	Hill	1889
Harrison R. H	Columbus	Colorado	
Harrison R. H., Jr	Columbus	Colorado	
Haughton R. E	Midland	Midland	1891
Herff Adolph	San Antonio	Bexar	
Herff Ferdinand	San Antonio	Bexar	
Hicks F. M	San Antonio	Bexar	
Hilgartner H. L	Austin	Travis	1892
Hodges R. C	Galveston	Galveston	1888
Holloway J. A	Round Rock	Williamson	1890
Holt C. I	Kilgore	Gregg	1892
Howeth V. A	Gainesville	Cooke	1887
Hudson C. P	Alvarado	Johnson	1886
Hudson J. W	Milano	Milam	1891
Hudson T	Belton	Bell	
Inge J. M	Denton	Denton	1885
Jarrett J. C	Valley Mills	Bosque	1891
Johnson Clay	Corsicana	Navarro	1892
Johnson M	Luling	Caldwell	1889
Johnson R. M	Palmer	Ellis	1886
Johnson S. W	Corsicana	Navarro	
Jones J. C	Gonzales	Gonzales	1878
Jones L. L	Forney	Kaufman	1891
Jones W. C	Walnut	Bosque	1891
Jones W. T	Hochheim	De Witt	1884
Jordan J. D	Madisonville	Madison	
Jordan P	Beaumont	Orange	
Karnes T. C	Gonzales	Gonzales	1890
Keller C. E	Luling	Caldwell	1889
Kemp Joseph	Walnut	Bosque	1890
Kendall O. J	Wichita Falls	Wichita	1886
Kennedy Jas	San Antonio	Bexar	1891
Kennedy M. B	Hillsboro	Hill	1890
Kimmins R. L	Iredell	Bosque	1891
King J. C. J	Waco	McLennan	1878
Kingsley B. F	San Antonio	Bexar	1886
Kirkpatrick D. F	Fort Stockton	Pecos	1890
Kirkpatrick S. B	Commerce	Hunt	1884
Knox M. D	Hillsboro	Hill	
Knox R. T	Gonzales	Gonzales	1878
Knox R. W	Houston	Harris	1885
Kuykandall A. R	Kopperl		1886

NAME.	POSTOFFICE.	COUNTY.	ELECTED.
Lancaster J. R	Thorp's Springs	Hood	
Lancaster W. H	Moulton	Lavaca	1887
Lane W. J	Marshall	Harrison	1886
Lankford J. S	Atoka, I. T		
Larendon G. W	Houston	Harris	1891
Larendon J	Houston	Harris	1869
Law J. D	Salado	Bell	
Leake H. K	Dallas	Dallas	1876
Lee B. F	Rockdale	Williamson	1890
Lee Geo. H	Galveston	Galveston	1888
Le Grand C. W	Hempstead	Waller	1877
Leonard H	New Braunfels	Comal	1889
Letcher J. S	Dallas	Dallas	1884
Lewright J. O	Austin	Travis	1887
Link E. W	Palestine	Anderson	1889
Litten Frank	Austin	Travis	1889
Litten J. M	Austin	Travis	
Loggins J. C	Ennis	Ellis	1882
Luckett H. P	Bastrop	Bastrop	1889
Lynch M. C	Carroll's Prairie	Hopkins	1892
Mahan L. L	Hempstead	Waller	1891
Martin F. R	Kyle	Hays	1884
Mathews W. J	Austin	Travis	1891
Matkin M	Fort Worth	Tarrant	
Mathews C. O	Belden	Morris	1892
Matthews J. A	Hondo City	Medina	
Mayes C. M	Archer	Archer	1890
May J L	Stephensville	Erath	
McCaleb J. H	Webberville	Travis	1889
McCall R. A	Ennis	Ellis	1886
McDaniel J. H	Centerville	Leon	1890
McGehee D. B	Brownwood	Brown	1891
McGhee J. A	Rice	Navarro	1891
McGhee R. W	Ammonsville	Fayette	1891
McGregor J. D	Kenneyville	Austin	
McKenzie E. K	Tyler	Smith	1892
McKnight W. B	Springtown	Parker	1889
McLaughlin J. W	Austin	Travis	1875
McLean W. S	Itasca	Hill	1890
McManus Chas	Brownsville	Cameron	1887
Means W. P	Cotton Gin	Limestone	1891
Menefee E. L	Granbury	Hood	1886

NAME.	POSTOFFICE.	COUNTY.	ELECTED.
Menefee W. E	West	Hill	1891
Metzler J. F W	Rose Hill	Harris	1887
Meyers W	Seguin	Guadalupe	1886
Miller J. W	Hillsboro	Hill	1888
Miller T. A	Corsicana	Navarro	1891
Minnock R. F	Waco	McLennan	
Monday W. H	Terrell	Kaufman	1892
Montgomery A. L	Tyler	Smith	1888
Montgomery D. W	Concord	Leon	1891
Moody R. E	Sweetwater	Nolan	1890
Morris J. E	Morrisonville		1891
Morris W. A	Austin	Travis	1875
Moss R. E	Mexia	Limestone	1884
Morton W. A	Cottondale	Wise	1888
Murdock E. P	Oakwood	Leon	1886
Musick J. T	Pittsburgh	Camp	1887
Motley John G	Overton	Rusk	1892
Nettles R. C	Marlin	Falls	1877
Newland W. B	Gatesville	Coryell	1892
Nott T. H	Goliad	Goliad	
Oates T. F	Mexia	Limestone	1890
O'Barr J. T	Ledbetter	Washington	1890
O'Brien J. G	Dublin	Erath	
O'Bryan A. F	Longview	Gregg	1892
O'Hara J. H	Grandview	Johnson	1887
Olive N. A	Waco	McLennan	1887
Oliver J. P	Caldwell	Burleson	1874
Orr C. L	Oakville	Live Oak	1890
Osborn J. D	Cleburne	Johnson	1882
Paine C. F	Comanche	Comanche	1882
Paine J. F. Y	Galveston	Galveston	1877
Pannill Wm	Chatfield	Navarro	1883
Parker Daniel	Calvert	Robertson	1887
Paschall Frank	Chihuahua	Mexico	1887
Patterson G. M. D	Franklin	Robertson	1889
Paulus A. D	Flatonia	Fayette	
Pearl Michael	Houston	Harris	1885
Pennington W. H	Drop	Denton	1886
Perkins A. N	Sabine Pass	Jefferson	
Phillips J	Wharton	Wharton	
Pitts F. M., Jr	Hubbard City	Hill	
Pope B. A	Dallas	Dallas	

NAME.	POSTOFFICE.	COUNTY.	ELECTED.
Pope Irvin	Tyler	Smith	1888
Pope Jno. H	Marshall	Harrison	
Pope R. J	Jonesboro	Coryell	1891
Powell W. M	Albany	Shackelford	
Powell W P	Willis	Montgomery	
Poynor J. S	Bartlett	Williamson	1891
Pratt J. M	Aquilla	Hill	1891
Preston John	Terrell	Kaufman	1887
Prince J. E	Big Springs	Howard	1890
Pugh W. W	Rusk	Cherokee	1892
Rabb E. M	Hallettsville	Lavaca	1887
Raines C. B	Mineral Wells	Palo Pinto	1890
Ramsdell C. M	Marble Falls	Burnet	1884
Randall L. J	Aurora	Wise	1890
Rape Thos. A	Ballinger	Runnels	1891
Rawlins B. L	Dallas	Dallas	1890
Ray D. M	Whiteright	Grayson	1882
Reeve J. R	Johnson City	Blanco	1889
Renfro J. C. B	LaGrange	Fayette	1875
Rentz J. H	Ferris	Ellis	1890
Rice S. P	Marlin	Falls	1881
Richardson D. P	Henderson	Rusk	1892
Richmond W. T	Manor	Travis	1891
Riley H	Bowie	Montague	1890
Robert J. J	Hillsboro	Hill	
Robuck T. B	Italy	Ellis	1892
Rogers J. D	Chappel Hill	Washington	
Rogers W. L	Temple	Bell	
Rosser C. M	Dallas	Dallas	1886
Rutherford R	Houston	Harris	
Saunders B	Bonham	Fannin	1877
Savage W. S	Denison	Grayson	1888
Schmidt F. A	Schulenberg	Fayette	1889
Scott M. M	Brownwood	Brown	1891
Seale W. H	Marquez	Leon	1891
Sellman B. E	Rogers' Prairie	Leon	1892
Sears J. H	Waco	McLennan	1869
Shirley D. G	Tyler	Smith	1892
Sessions E. L	Hillsboro	Hill	
Shands N. B	Forney	Kaufman	1886
Shelton S. E	Waco	McLennan	1887
Sholars S. W	Orange	Orange	1889

NAME.	POSTOFFICE.	COUNTY.	ELECTED.
Shropshire L. L	San Antonio	Bexar	1885
Sims A	Weatherford	Parker	
Sims R. S	Iowa Park	Wichita	1891
Smith C. A	Tyler	Smith	1889
Smith J. R	Hillsboro	Hill	1890
Smith M	Black Jack Grove	Hopkins	1892
Smith Q. C	Austin	Travis	1884
Snead A. H	Waco	McLennan	
Snyder E. W	Benbrook	Tarrant	1890
Southerland G. W	Winchester	Fayette	
Sparkman J. T	Alvord	Wise	1890
Spring J. V	San Antonio	Bexar	1888
Stallcup J. H	Jefferson	Marion	
Starley J. F	Marlow, I. T		
Starley W. F	Tyler	Smith	
Steiner Ralph	Austin	Travis	
Stephens G. M	Beeville	Bee	1889
Stephens H. C	Arlington	Tarrant	1890
Stone J. K	Beeville	Bee	1886
Stout S. H	Cisco	Eastland	1884
Stuart D. F	Houston	Harris	1859
Styles T. W	Stephenville	Erath	1887
Suttle I. N	Corsicana	Navarro	1891
Swearingen R. M	Austin	Travis	1876
Swindall F. W	Alba	Wood	1892
Talbot R. D	Birdville	Tarrant	1890
Talley R. P	Temple	Bell	1880
Tate H. L	Lindale	Smith	1892
Taylor E. V	Davilla	Milam	
Taylor I. B	Muldoon	Fayette	1891
Terrell W. M	Farmer	Young	1886
Thomas G. I	Farrar	Limestone	1891
Thomas I. E	Mexia	Limestone	1886
Thomason J. W	Huntsville	Walker	1887
Thompson B. R	Era	Cook	1890
Thompson F. D	Fort Worth	Tarrant	
Thorpe H H	Liberty Hill	Williamson	1884
Thrash D. E	Galveston	Galveston	1888
Thruston S. D	Dallas	Dallas	1884
Towns J. M	Joshua	Johnson	1890
Trueheart C. W	Galveston	Galveston	
Tucker F. H	San Augustine	San Augustine	1886

NAME.	POSTOFFICE.	COUNTY.	ELECTED.
Tucker J. P	Overton	Smith	1888
Tye R. P	Clarendon	Donley	1890
Tyner T. J	Austin	Travis	
Urwitz Max	Houston	Harris	1889
Van Gaskin J	Luling	Caldwell	1889
Vaughan B. H	Vaughan	Hill	1890
Vaughan W. R	Nesbit	Robertson	1889
Wakins W. B. W	Eureka	Navarro	1890
Walker A. C	Rockdale	Milam	
Walker W. W	Schulenburg	Fayette	1878
Wallace D. R	Dallas	Dallas	1869
Ward E. J	Galveston	Galveston	1886
Ward W. L	Lone Oak	Hunt	1886
Watkins W. A	Kemp	Kaufman	1891
Watkins W. B	Stone Point	Van Zandt	1886
Watson J. S	Burnet	Burnet	1888
Way W. H	Austin	Travis	1889
Weathered A. J	Osceola	Hill	1890
Welch W. C	Commerce	Hunt	1890
Weller C. O	Austin	Travis	1887
West H. A	Galveston	Galveston	1887
West W. B	Fort Worth	Tarrant	1889
White F. S	Austin	Travis	1886
White J. A	Prairie Plains	Grimes	1890
White W. P	Henderson	Rusk	1892
Wier R. R	Itasca	Hill	1886
Wilkes W. H	Waco	McLennan	
Wilkes W. O	Waco	McLennan	1891
Wilkinson C. H	Galveston	Galveston	
Williams O. L	Dallas	Dallas	1880
Williamson J. J	Cleburne	Johnson	1882
Williamson J. R	Brenham	Washington	1885
Williamson R. A	Woodbury	Hill	1887
Willis Jas. A	Waco	McLennan	1873
Wilson J. T	Sherman	Grayson	
Witherspoon H. F	Corsicana	Navarro	1891
Wolff A. S	Brownsville	Cameron	1888
Wolverton A. J	Montague	Montague	
Wooten T. D	Austin	Travis	
Worsham B. M	Austin	Travis	1890
Wortham P. K	Waco	McLennan	1891
Wysong J. H	Hillsboro	Hill	1891

NAME.	POSTOFFICE.	COUNTY.	ELECTED.
Yater W. M	Cleburne	Johnson	1887
Yoakum F. E	Shreveport, La		1887
York W. L	Decatur	Wise	1882
Young F. E	Brownwood	Brown	1890

The following members have changed locations since the list was published last year, and their present addresses are unknown to the Secretary:

Buyers, W.
Cooper, St. Cloud
Paschal, Frank
Stone, J. K.
Welch, W. C.

Anyone knowing the residence of the above will confer a favor by kindly notifying the Secretary at once.

MINUTES

OF THE

TWENTY-FOURTH ANNUAL MEETING

OF

THE TEXAS STATE MEDICAL ASSOCIATION.

TYLER, TEXAS,

April 26th, 27th and 28th, 1892.

TEXAS STATE MEDICAL ASSOCIATION—TWENTY-FOURTH SESSION.

FIRST DAY—*Morning Session.*

OPERA HOUSE, TYLER, Texas, April 26th, 1892.

The meeting was called to order by the chairman of the arrangement committee, Dr. C. A. Smith.

Rev. C. H. B. Turner invoked a blessing upon the deliberations of the Association.

Dr. Smith introduced the Hon. R. B. Long, Mayor of Tyler, who delivered the following address of welcome on behalf of the city of Tyler, Texas:

HON. R. B. LONG'S ADDRESS.

Mr. President and Gentlemen of the Texas State Medical Association—It affords me much pleasure as a citizen of Tyler, and in my official capacity as its mayor, to welcome to our city such a representative body from all parts of this great State of Texas; and, whilst we live in its eastern portion, we none the less love and appreciate the citizens of this State, it matters not whether from the sand hills of Smith county or from the plains of the great northwest.

In extending to you our welcome, we also offer you our aid and sympathy, and trust you may be able by your interesting deliberations to promote the progress in that great and noble profession which you have chosen: that, when you have passed over to that silent shore and have received "Well done" for all the charities and services you have extended here, you may, perceiving all the ills of human flesh is heir to, point back with pride to the achievements you have made in the profession—a profession that is as unassailable as time itself—and may look forward with the assurance of that reward that awaits your coming.

It is useless for me to turn over to you the keys of the city as the doors of the city are always wide open and you have a welcome therein.

Again I welcome you to our city and say to you that the city is yours; you have but to command and we obey.

Dr. Smith next introduced Dr. H. L. Tate of Lindale, who delivered the following address:

DR. H. L. TATE'S ADDRESS.

Mr. President and Gentlemen of the Medical Association of Texas—Custom, long continued, makes law; and as it has long prevailed for some one of the local profession to welcome you to their home, on your assembling, it is in obedience to this custom, now a law, that I am before you. A pleasant duty to me surely, and my only regret is that words, bare words, no matter how well chosen, can never give you a just conception of the warm welcome we have in our hearts for you this day. But it was always thus; for when was it possible for the best of our natures to be photographed, so that all might see? Love and welcome, these we give you—love, in that you, with us, serve humanity; welcome, in that you are our guests, worthy in every way of our hospitality.

We who are members of the profession know, if others do not, how worthy you are of all honor; what heavy loads of toil and care you bear through life—and how like a blessed oasis is rest to body and mind. For a long year—how long to many who can tell—you have been out in the highways and byways, doing deeds no man can measure; and now for a brief season you meet, grasp hands, compare notes, speak words of cheer each to the other; then away, to the noblest work time ever saw since Christ came to save the world. Could we do too much or have too great a welcome for such men, laboring in such a cause? We feel that we can not, and that your pleasure does us and our city honor, and may our right hands wither and fall, if we do not everything in our power to make your rest such as you anticipated and such as will leave a pleasant remembrance in the years to come.

Largely you lead lives of isolation. Your work is a single work. "You tread the wine press alone." No one can share your burdens, and none can appreciate their magnitude, save, perhaps, a fellow-worker in the cause of suffering humanity. From day to day you go forth to battle, canoplied for the strife, and many a stroke is received that leaves you prostrate, crushed, in body and mind, vital energy spent, barely able to crawl limply forward to renewed contests. But you do go forward, to your honor be it said, bearing your burdens bravely, oft times making the defeats of today bring victories tomorrow; and when the victory does come the world can not know its ecstacy, as none can know the anguish of defeat.

It may seem egotistical in me to say it, but, brethren of Texas, you belong to a grand profession, the noblest in all the earth, and its chief nobility consists, working as you do for humanity, in demanding at your

hands that, after the defeat and the victories, after the years of labor spent, the results belong to the world. No patenting your discoveries; no trade-marking your appliances, no hedging about by sophistry, dark and devious, the truths you have unearthed; but letting the arrow fly straight to the mark, telling what you know and knowing what you tell. And it is for this purpose, largely, that you have assembled here today. For one year you have been out in the field of active work, and now comes the harvest and the rest—when from the east and the west, the north and the south, you come bearing the results of this work and placing it in the common store house of our profession, from whence all may freely draw. Where else in the world will you find a better exemplification of a true nobility than this?

He, perchance, might be pardoned, for our great Master teaches mercy, who, falling a victim to the too common fault of mankind, cupidity, should deny his brethren and the world the boon his work has wrought. But when I look in the faces of those before me, I see none, I am sure, but who have risen grandly above the desire of sordid gain and have brought freely all you have of truth and knowledge to place at our command. And if for naught else, for this alone, I see ample reason why the profession of Tyler, and Smith county, should extend you welcome to our midst.

But we have other reasons besides for this welcome and why we are glad to see you. We, too, have been in harness, toiling in the fields; and some have, for long years been almost ready to drop, where we stood, from sheer exhaustion, and we feel sadly the need of rest and words of cheer. The rest we get in being here to meet and greet you; the words of cheer I know will come, and I feel certain now, before the curtain is fairly up, that some of us, who have lived and toiled until gray hairs and old age have overtaken us, will in this assembling have found the veritable fountain of youth. Why, I can feel new blood coursing through my veins, giving me new life, and when I anticipate the good things I know you have in store for us, I can imagine that I am a youth again of twenty-five, instead of being a grizzled veteran of fifty. My old friend and veteran, Dr. McCreary, over there, who was here with Governor Lubbock when Columbus discovered America—he, too, looks quite youthful. All of us feel the charm working, as I can plainly see; and if it is thus in anticipation, what may not the reality be?

But we have another reason yet why we are glad to see you. We want to show you our town and how we do things over here. Although we are but a little city, nestling away amid the hills of east Texas, numbering only about ten thousand souls, yet we feel that we have a heart as big and a welcome as warm as though we numbered a hundred thousand. Aye, and we will number a hundred thousand before two decades shall have passed, and we invite you now to come to see us then, and every year un-

til then, that we may convince you, if there are any doubters, that our welcome is in our hearts as well as in our words.

All our people love Tyler very dearly and are very proud of their little city; it is their home, and this to them seemingly means more than to most people. You, no doubt, many of you at least, think you have the most beautiful homes in the world; that the air is fresher and sweeter there than in any other spot fanned by God's breezes; that the sun shines brighter; that nature has been more lavish in bestowing her best gifts there than elsewhere. But with us the thought becomes a certainty, and we know ours is the most beautiful place on earth. We dread dying here because, though good and saintly and meriting reward, we can not count with safety upon the superior beauties of the celestial city. It is a fact, known and vouched for here, that we never permanently lose any of our people except by death, and this rarely. (Haven't we Drs. Bell, Starley, Pope *et id omne genus* with us?) Some, however, do leave us for a time, go out from the roof tree to seek their fortunes; but meet them where you will, and they will tell you, when speaking of home, that it is in Tyler. With loving thoughts they turn hitherward, and no matter where they may have wandered, barring accident, they always come back in time to die. Far be it from me. I am your friend, and would not for the world mislead you, for should you conclude to try it here, though a millionaire, your widow would be left penniless—our undertakers know their business. (Perhaps, though, I ought not to attempt this joke at their expense; upon reflection, I will not. I recall it; for you know they have these opportunities chiefly through our mistakes.)

The fact is, the undertakers are not by themselves; the most of our people know their business. Sometimes, though, we are called on a pair of deuces or ace high, and, on a show down, have to surrender the chips. This, however, rarely happens on our bluffs; for the other fellow, knowing our luck, seldom calls.

Now, if there are any preachers in the hall, I don't want you to think that I am disposed to insinuate that anybody in Tyler knows what a pair of deuces or ace high is; for they don't. You have done your duty, and this is only a figure of speech. We play different games from any in which these terms are used; or, if we do not, and come to the real thing, why, our boys only know through the other fellow that there are any such hands in the game. They never play; but if they do, the lowest hand ever held is a queen full; most generally it is four aces or a straight flush. And it is usually this way in our business affairs (and I am very much tempted to say in politics also, but I will not), as we will try to give you opportunities of observing before you leave.

I shall not inflict upon you a batch of figures as to how much we have invested in brick and morter, machinery and manufacturing, in the last

few years, for I despise statistics; but I want to say that we are a real live little city and steadily forging forward, and although it might take a "sewing machine agent or a drummer a week to find us," yet other people find us without so much trouble, and when they do, if they are looking for investments which declare dividends in hard cash, they generally drop down and become one of us, or put their money here and let it work for them. There is nothing small about us except our size; if we can't get the man, why, we will take his money and give him real solid investments therefor. We had rather have both, of course, but we have a reputation to sustain, and if the man does pass on and leaves his money, why, we will worry along with it as best we can. They can't make us mad by leaving their money.

Although we are doctors, and it is supposed by many that we never have time to do anything but look after practice and read our medical literature, yet it is a fact that most of us keep pretty well posted as to what is going on in the world. I read our State papers occasionally, and I know you do, and we see a great deal being said just now about the Tyler gang and the Waco gang, and all the other gangs. And it is said that each of these gangs are antagonistic, the one to the other, and that each one wants all the earth, and that one in particular, not being satisfied with the earth, is reaching out for the outside planets. Now, this one in particular, this Tyler gang, have you for their guests (oh! yes; you are in the hands of the Philistines), and as I am one of you, and you are one of me, why, I want to tell you something that may be of benefit to you. If while here, they (this Tyler gang) don't treat you right; if you see a disposition on their part to treat you as Jonah did the whale, just blab it right out and tell them in plain English that they are mighty small potatoes, after all the fuss they have been making, and that Waco is another sort of a town to this old hole, anyhow; and that will fetch 'em. For if there is anything on earth we believe stronger than another, it is that our half is stronger than the Waco half of Texas. If there was any doubt in our minds before you came, it is all gone now, for I think I can feel the see-saw going down, showing that we are the heaviest or have the longest end of the pole. And how could it be otherwise, with all us doctors here; why, I should be surprised if before morning we got so straight up and over-balance the other side so much we didn't slide off.

But no matter if ours is the biggest or longest half now, you being here, it may not be that way next year, you being elsewhere; and no matter if we do have a little pleasantry at the expense of other towns, or rival gangs, we all remember always, I hope, no matter to which half we belong, that the other half, is a part of Texas, and, being a part of Texas, that next to our half, we love that best of all the world; and whether we belong to the Tyler half or the Waco half, the San Antonio half or the

Dallas half, the Houston half or the Galveston half, or any other half, that it takes all these halves to make Texas one and indivisible. And that we love and honor her for what she has been and is to us this day—our foster-mother, our beloved State; great in her past; greater in her future; reflecting honor upon us, her children, in many ways, chief among which is, that she has a "Medical Association" the peer of any and all the world.

Brethren of Texas, we greet you. You are our guests within our gates, and all we have of love and welcome is yours.

Dr. Tate was then followed by the Hon. R. B. Hubbard, who delivered the following address of welcome in behalf of the citizens of Tyler:

GOVERNOR R. B. HUBBARD'S ADDRESS.

Mr. President and Gentlemen of the Medical Association of Texas—I was waited upon late last evening to perform this very pleasant duty. I promise you the best feature of what I say to you will be its brevity.

I am here to welcome you in behalf of the possible ten thousand population of this beautiful little city. (If I were not near here I might say twenty thousand, or anything more than ten thousand, but when I am near the record I must speak by the record.) For these thousands of fair women and brave men who have been here for nearly a half century, I extend to you a most cordial welcome, not only to the city and its highways and byways, but to its homes and their hospitality.

Nine years ago—I now recall it through the mists that have gathered in that period of time—the members of the Texas State Medical Association met in the old opera house, in a temple of Thespis as beautiful as this one is—and I take it that the architecture of this building, though the building be small, will equal any in our great State. I happened to be one of those who welcomed you. Pardon me if I contrast for a moment the then with the now. Only one or two of the medical gentlemen in whose behalf my friend, Dr. Tate, has spoken are here to welcome you; most of them have gone to distant lands or to other portions of our own State, or across that river from whose banks none ever return. Among them I recall Dr. Starley, then the president of your association; a man ripe in the experience of his profession; devoted to it in all its works. He has passed beyond to the great physician in the better land. And who will not remember—now, I do not wish to be sad today; I am no pessimist, but an optimist—that bright physician who would have stood today aside the great surgeons of our country; lovable as woman in his intercourse with man; cheerful at the bedside, and careful of the needs and care of his fellow-beings—Dr. Parks; peace to his memory, he is not here. I remember many men of distinction in your body in the great State you represent who

have passed away. But you are here in their places, and I am here to welcome you in behalf of the men who have taken the places of those who are no longer with us. I welcome you because of the character of the great profession you represent. I speak from a non-professional standpoint when I say I have always believed and have found it better "not to take" than "to take." The greatest of all physicians, I think, are those who administer the least medicine—who understand, as I believe they call it, the diagnosis of the case, the cause of the sickness, and who then give the least possible physic. Nature is, after all, the best doctor. If you do not abuse nature there is but little use for "sawbones." I nearly always believe in "throwing the physic to the dogs," and my present body indicates the practical working of my theory about medicine.

I am glad to welcome you because you occupy a position second to none but that sacred one whose minister has just addressed you, asking the blessings of God upon this body.

I will not speak of the great benefit and importance of the medical profession to our country—that goes without saying. The advance in medical science, though I cannot speak of it as one of the profession, has been a great one. It has kept pace with the law and theology, and all three have made great strides to the front. The strides that have been made in the medical sciences have been the wonder of the whole world.

I remember, and I am yet a young man, the time when a man was racked with fever they gave him loads of calomel, as you would load a Columbian on a man-of-war, and would not let him have any ice. I remember when the old women in my native State would get around the bedside and frighten a poor man to death. I remember about the old treatment of yellow fever. When that great curse came on the land—I was not there in person, and only know of it from afar—but I do know from those that passed through it that ice and cooling draughts, and certain systems of medication proved the death of at least seventy-five per cent, and those who recovered owed it chiefly to good nursing, which is always the best part of the medical profession after all. Not twenty-five per cent of yellow fever patients die today if proper attention is given.

So with surgery. I remember the first time I had any experience with it, how they literally sawed off a boy's leg while he was still drenched with blood and writhing with pain; how the surgeon would fix your right or left arm with a sharp knife, regardless of the terrible suffering. Now, owing to the genius of your grand profession, with the grand discovery of anæsthetics, you may open up the vitals of the human body, dissect them without pain or loss of blood, and almost bring life back; in fact, the physician of today can almost look into the inner man and discover his disease It is a wonderful progress, and I am here to welcome the men of a profession that has drawn unknown blessings upon mankind in the way

of alleviating human misery and suffering. Not only that; but the charitableness of your profession. It is historical. You go in the winter's cold or summer's heat alike to the cottage of the poor as to the palace of the rich.

Until my father suggested otherwise, I always wanted to be a doctor.

The ideal physician occupies a position where he can be of more use to his race than all others. I shall never forget the picture how the mother, father, sister, brother, wife or husband send for the family physician, and when perchance he entered the sick chamber, with what anxiety and eagerness the patient, whether a child or man, with pale hands and paler cheek, looks to his eyes as he comes in and relieves the sufferer. What gratitude the suffering victim of disease feels for that physician.

Bishop Williams, of Georgia, for thirty years a missionary to China and Japan, said to me: "In looking over the years of my mission, there are two classes to whom the evangelist of the Orient is indebted more than to all others of our great land." I asked him to whom did he refer. He said: "First to the missionary doctor—men sent as a class to minister to the heathen; by the bedside of the old and young, gaining their confidence, bringing them to life, teaching them the doctrine of our religion, falling as it does in the grounds of gratefulness." The other was "woman," with her never tiring energy in working for the heathen. You have a noble mission to perform.

I welcome you again because you represent a great State, and again on this the first anniversary of your Medical Association since the organization of the Medical University of Texas. I congratulate you upon the fact that at last you are beginning to educate your young medical men at home in Texas. There is no reason why, as in the ages of your father, you should go to Philadelphia, Ann Arbor, New York, Louisville, Paris or Berlin. You have men of the profession, more than twenty times the fingers I have on my hands, here in Texas today eminent in the different walks of medical science; and I say, educate your young men at home. Let them be not only "of Texas;" but "for Texas," in the walk, not only of their profession, but as well in the love of her doctors.

I was today reading in the News the address of that noble dean of the university at Galveston, Dr. Paine, by whose presence we are honored here today. From that address the remarkable statistics show that in 1890 there were 493 young men studying medicine in the medical colleges in the other States, some as far up as bleak New England, some as far west as Denver. Do you know what that costs your State? Two hundred and fifty thousand dollars annually; enough with which to build the grandest university in the country, equal to those of Philadelphia or New York.

From the census bureau I have it (and let our heads bend in shame)

that 1123 Texas young men are now being educated in other States, and there were 973 girls educated out of the State who are to be the wives of our sons. Surely this state of affairs should not exist. I must congratulate the dean of the faculty of the University Medical School, who honors us today, and those who stand by this Texas institution, upon the showing made of the character of work done last session. What Texas needs is a medical profession of its own; also, one of law and one of theology. Let us educate our young men and women in every department at home.

I want to congratulate you lastly that you are keeping up a first-class medical organization. No great system of ethics or of science can ever succeed without co-operation.

I again welcome you in the name of the citizens of this city, and wish you success in your undertakings. Ample amusements have been arranged for your pastime.

Dr. C. A. Smith, chairman of the committee of arrangements, then made the following report:

Gentlemen of the Texas State Medical Association—As chairman of your arrangement committee, I beg to submit the following report:

At a meeting of the physicians of Tyler, and Smith county, held in February last, various committees were appointed to raise the necessary funds, correspond with the railroads for reduced transportation, look after hotel and boarding house accommodations and attend to other duties too numerous to mention but very necessary for the meeting and entertainment of so large a body as the Texas State Medical Association. How well your committee have succeeded we leave you to judge for yourselves, but I must say for our doctors and citizens that they have worked hard to make your meeting in our little city a success, and if we fail to please you and make you have a good time, it will be an error of the head and not of the heart.

We were unfortunate in having one of our best hotels destroyed by fire only a short time before the meeting of the association. This greatly reduces our hotel capacity, but our committee have a list of over four hundred homes of our citizens who will entertain you at their houses when the hotels are full, and anyone not provided with accommodations will please apply at the National Hotel, where a list will be kept of private houses that will entertain doctors. Our ladies and various social clubs have provided a series of entertainments, and will be very much disappointed if you do not patronize them freely. The following is the social programme:

Tuesday evening—Receptions by the Tenneha Club and Benevolent Patriotic Order of Elks, and their ladies, at their club rooms.

Wednesday—Receptions at the homes of our citizens. The Quid Nunc

will receive at the home of Hon. H. M. Whitaker; the Pathfinders will receive at the home of Hon. Horace Chilton; the Chautauquans will receive at the home of Mr. L. L. Jester; the Atheneans will receive at the home of Mr. Dick Reviere.

Thursday evening, after the address of our president, Dr. W. H. Wilkes, a banquet will be given to the visiting doctors by the medical profession and citizens of Tyler.

The freedom of the Tenneba Club, next door to the opera house, has been generously tendered the visiting doctors.

The regular association badge will admit you to all entertainments. We welcome you one and all to our little city, and wish you each and every one a pleasant and profitable time during your stay with us, and assure you we shall do our best to make your stay a pleasant one.

At the conclusion of Dr. Smith's report, President W. H. Wilkes took the gavel, and after responding to the addresses of welcome in a few appropriate remarks, called the association to order.

Roll call, next in order, showed a quorum present.

The reading of the minutes of the last session was, on motion, dispensed with.

The secretary then read his annual report, which was, on motion, received and referred to a committee, consisting of Drs. C. M. Rosser, M. D. Knox and J. F. Y. Paine.

SECRETARY'S ANNUAL REPORT.

Dr. W. H. Wilkes, President, and Gentlemen—I have the honor to present herewith my annual report. As the other members of the publication committee, Drs. Dock and Wysong, left Galveston before the work of publication was fairly begun, both the responsibility and labor fell upon me. Hence I shall embody in this report that of the committee on publication.

Dr. Daniel reported at the meeting last year a membership of 434. The roll now shows ordinary members 360, honorary 13, making a total of 373, from which must be deducted 4 deaths, leaving the actual number 369; showing a loss since last meeting from deaths and members dropped for non-payment of dues, 65. Our losses from death include Dr. T. S. Burke, of Corpus Christi, who died September 21, 1891; Dr. W. T. Strain, of Wills Point, died November 1, 1891; Dr. W. W. Reeves, of Austin, who was killed December 29, 1891, and Dr. T. M. Stone, of Jasper, died January 18, 1892. There may have been other deaths, but these are the only ones

known of by me. Thus the grim reaper, death, has been harvesting since we met a year ago. When he comes in the fullness of time and takes away of our members those whose silvered locks and feeble steps help to tell the story of a long and well-spent life; when he gathers them as a shock of grain fully ripened for the harvest, although our hearts are saddened when we consider how we will miss their congenial companionship and wise counsels, still we bow in submission to the inevitable providence; but when he comes suddenly and terribly by the hand of the assassin, as in the case of our brother Reeves, we are inexpressibly shocked and grieved. Here he was one day in the very hey-day of vigorous and happy manhood, with apparently every prospect of a long and useful life, honored with a position at the head of an institution where his ambition would be stimulated not only to achieve a reputation, but to be the means of alleviating the sufferings and curing the diseases of those unfortunates in his care; when "that spirit upon whose weal depend and rest the lives of many" is, without a word of warning or a moment for preparation, called to stand before his maker, we may well be appalled, and ask ourselves the question, "Who next?" Surely we should take to heart the impressive lesson, and be ready and watch. It was not my privilege to have an intimate acquaintance with Dr. Reeves, but remembering well the hearty grasp of his hand and his cordial invitation to visit the asylum but a short time before the sad occurrence of his death, I can not refrain from dropping a tear upon his untimely grave, and expressing a word of sympathy for the widow and fatherless little ones left behind. In this connection let me request when a member dies that some brother familiar with the facts would kindly notify me.

Now as to the transactions. The volume speaks for itself; it might have made a better appearance, or it might have been worse; suffice here to say that it was my first effort in this direction and that I did my best, and was ably seconded by the printers, to publish a book worthy of the association. The Transactions were ready for delivery about August 1. The total cost of printing 600 volumes was $696.20; cost per volume, $1.16; postage, mailing and delivery, 17 cents; making $1.33 total cost of printing and distribution per volume. The work can be done for less by leaving off the binding; whether this should be done is a matter for you to decide. There are about fifty volumes left of Transactions for 1891. If in accordance with your wishes, I will distribute a certain number of them to new members who may request them.

There is one matter of vital interest to which I beg to call your attention if you will excuse me for harping on an old theme. I am more than ever convinced from recent experience that our greatest deficiency as a scientific body lies in the tardy and imperfect arrangement of the programme. Our meetings will not be interesting and profitable until we can announce

the titles of papers beforehand. Illustrative of our defects in this particular, compare our announcement with those of two others, viz., the State Medical Associations of Georgia and Iowa; the former announces thirty-three papers, the latter fifty-four, whereas I could report only sixteen, and some of them are contributed by distinguished gentleman outside of the State. The fault belongs largely to officers of sections. It appears to me that, with proper effort upon their part, the titles of papers could be secured in time for publication. Members can not prepare for intelligent discussion unless they know the subject of papers. I shall consider it to be my duty to inquire of each chairman and secretary of sections as to their intention of serving, and I would respectfully suggest to the nominating committee that no man's name is an ornament to the pages of the Transactions if he fails or is negligent in the performance of his work. In the matter of finances, the association has wisely transferred them to the treasurer, and to him I shall account for my expenditures and the small sums which have come into my hands. Respectfully submitted,

H. A. WEST, M. D.,
Secretary.

The following report of the treasurer was read and referred to a committee, consisting of Drs. N. B. Kennedy, T. J. Bennett and J. T. Fields:

TREASURER'S REPORT.

Dr. J. Larendon, treasurer, in account with Texas State Medical Association.

RECEIPTS.

1892.		
April 23, to cash balance on hand, as per last annual report	$ 448 04	
April 23, to cash collected from members for dues up to date	1,861 57	
April 23, to cash for sale one dozen Transactions	16 80	$2,326 41

DISBURSEMENTS.

1891.		
April 30, by cash paid to stenographer	$ 175 00	
April 30, by cash paid to H. A. West, stationary and printing	25 00	
April 30, by cash paid to J. Kopperel, stationery	60	
April 30, by cash paid to F. E. Daniel, secretary's salary	200 00	
April 30, by cash paid to publishing committee	300 00	
April 30, by cash paid to J. Larendon, treasurer's salary	150 00	

DISBURSEMENTS—CONTINUED.

April 30, by cash paid to treasurer for postage.....	10 00	
May 29, by cash paid to A. C. Gray, printing for treasurer	3 00	
June 3, by cash paid to W. H. Coyle, ledger for treasurer	2 50	
July 27, by cash paid to Clarke & Courts, for printing and distributing Transactions.....	795 30	
July 27, by cash paid to H. A. West, secretary's salary	200 00	
July 27, by cash paid to publishing committee	300 00	
1892.		
April 11, by cash paid to Clarke & Courts, printing...	34 35	
April 11, by cash paid to exchange on same.....	25	
April 23, by cash balance on hand.....	130 41	$2,326 41

Respectfully submitted,

J. LARENDON, Treasurer.

Houston, Texas, April 23, 1892.

President W. W. Wilkes then read his annual report and recommendations, which were, on motion, duly received and referred to a committee, consisting of Drs. J. L. Cunningham, W. H. Monday and E. P. Becton.

PRESIDENT WILKES' REPORT.

Fellows of the Texas State Medical Association—After another twelve months' campaign against disease and death, we have again gathered into our appointed rendezvous to acknowledge our defeats, rejoice over our victories and relate the interesting incidents of the warfare, that each and all may be benefited and strengthened by the experience of another year. Whatever may have been our successes or failures since we last met together, under all circumstances the banner of honorable medicine has been bravely borne aloft by the members of this association, and has in no instance been permitted to trail in the mire of charlatanism.

First, in sadness and sorrow, we would make honorable mention of some of our gallant soldiers who during the past year have fallen by the wayside, including the names of our brothers—

T. S. Burke, Corpus Christi, Texas.

W. T. Strain, Wills Point, Texas.

W. W. Reeves, Austin, Texas.

T. M. Stone, Jasper, Texas

We would make no distinctions among our honorable dead; but we recall with peculiar regret the sudden and violent death of Dr. W. W. Reeves,

superintendent of the Austin Insane Hospital, and chairman of your committee on medical jurisprudence and psychology. He was shot down by the hand of an insane patient and died, as all brave men hope to die, at his post in the honorable discharge of his duty.

Having no pet theories of legislation to put in operation, and having long since been convinced that such associations as this are more injured by over-legislation than by no legislation, we have no suggestions in this direction to make, except to recommend that a committee be appointed to revise our constitution and by-laws. This committee could incorporate and harmonize the various amendments that have from time to time been enacted by this association; and they could especially make more lucid and plain the methods of procedure in cases of trial and punishment.

Our business intercourse with Secretary West during the year has been of the most pleasant nature, and, at all times he has been prompt, courteous and obliging. We would also commend the neat, concise and tasteful manner in which our annual Transactions have been issued. We must, though, express regret that the usual list of officers contained in other volumes has been omitted. This objection is, perhaps, founded on a selfish reason—the high standing and honorable position occupied by this association exalts the roster of officers into a roll of honor which we desire to see perpetuated.

You are no doubt aware of the fact that a bill is now before the Congress of the United States to create a Bureau of Public Health. This bill was introduced in response to a memorial from the American Medical Association, and the edition of *The Journal*, of that association, suggests that the different State associations should, at their annual meetings, indorse this measure by suitable resolution, and urge the passage of this bill by the present Congress; and also that individual members be requested to write to their respective members of Congress urging them to support the bill. This important matter is placed before you for such action as this association may see proper to take.

By request of Dr. Charles A. L. Reed, secretary general, we call the attention of this association to the organization of the Pan-American Medical Congress, in order that such action may be taken as may be deemed by them advisable. The first Pan-American Medical College will be held in the city of Washington, D. C., September 5, 6, 7 and 8, 1892. Its first general officers are: William Pepper, M. D., L. L D, Philadelphia, Pa., president; Abram M Owens, A. M., M. D., Evansville, Ind., treasurer; Charles A. L. Reed, M. D., Cincinnati, O., secretary general.

If within the purview of this report, we would respectfully recommend that this association, in some proper and respectful manner, protest against the precedent made at the last meeting of the American Medical Association in refusing to make the action of its nominative committee

final in the selection of the next place of meeting, and in substituting a different city by a viva voce vote of the members present. The selection of the place of meeting should be made by the committee on nominations, because the different States and Territories are represented on that committee, while a majority of those present are invariably from the section of the country in which the meeting is held. If the place is to be selected by a vote of all present, there is danger that the American Medical Association may be kept continually in the same section, and thus cease to be a national institution.

Trusting that every member of this association will contribute his full quota toward making this, our second meeting, in the lovely, hospitable city of Tyler, harmonious, instructive and profitable, we remain,

Yours truly, W. H. WILKES, President.

Tyler, Texas, April 26, 1892.

Dr. T. J. Bell, of Tyler, read an invitation to the members of the association to attend the anniversary celebration of Odd Fellows, tonight at Elks' Hall.

Dr. H. A. West, secretary, read an invitation to the members, inviting them and tendering them to the privileges of the Young Men's Christian Association rooms. Upon motion, the invitations were accepted with thanks.

Dr. West stated in regard to the omission of the list of retired officers from the transactions, that such omission was unintentional and that the list should hereafter appear.

Upon motion, the association adjourned until 2 p. m.

FIRST DAY—*Afternoon Session.*

Meeting called to order at 2 p. m.

On call of judicial council, the following members answered to their names, viz: Drs. J. D. Burch, J. V. Spring, J. C. Loggins, J. C. J. King and W. P. Powell.

The president appointed the following members on the council temporarily: A. B. Gardner, I. E. Clark, Samuel R. Burroughs, F. M. Pitts, Jr., and W. F. Starley.

The Section on Practice of Medicine, etc., being called, Dr. T. J. Bell, chairman, read his report, which, on motion, was referred to the committee on publication.

Dr. J. P. Tucker, of Overton, read a paper entitled "A Case of Peritiphlisis," which, on motion, was referred to the publication committee, after discussion by Drs. Pope and James Kennedy.

Dr. H. A. West read a paper entitled "The Diagnosis of Miliary Tuberculosis," which, upon motion, was referred to the publication committee.

Dr. J. D. Burch read a paper entitled "La Grippe," which was discussed by Drs. J. F. Y. Paine, J. H. Sears and H. A. West, and, on motion, was referred to the publication committee.

The Section on Practice of Medicine closed and President Wilkes took the chair.

The committee to whom was referred the treasurer's report made the following report:

To the President Texas State Medical Association—We, your committee appointed to examine the report of the treasurer, Dr. J. Larendon, beg leave to say that we have carefully examined the same and find it correct, and respectfully ask that it be received. N. B. KENNEDY, Chairman,
J. T. FIELD.

April 26, 1892.

On motion, the association adjourned until 9:30 a. m., April 27, 1892. Approved. W. H. WILKES, M. D., President.
H. A. WEST, M. D., Secretary.

SECOND DAY—*Morning Session.*

TYLER, Texas, April 27, 1892.

The president, Dr. Wilkes, called the association to order at 10 o'clock.

Prayer, by the Rev. C. H. B. Turner.

The minutes of the preceding day were read and, on motion, approved.

Dr. C. A. Smith, chairman of the committee on arrangements, announced a change in the programme as to tonight's social entertainments.

The judicial council reports as follows:

TYLER Texas, April 26, 1892.

On application, the following gentlemen, their credentials being satisfactory, were duly elected to membership in this association, viz:

M. M. de la Garza,	Albert C. Bramlett,	H. L. Hilgartner,
William H. Baldinger,	E. K. McKenzie,	R. E. Selman,
C. O. Matthews,	D. P. Richardson,	F. W. Swindell,
W. H. Monday,	W. B. Newland,	E. S. Collier,
J. S. L. Gray,	J. H. Shirley.	

J. V. Spring was enrolled as a delegate from the West Texas Medical Association, and R. A. Williamson, John Buie, M. D. Knox, N. B. Kennedy, W. M. Yates, L. B. Roebuck and B. H. Vaughan were enrolled as delegates from the Medical and Surgical Association from Hill county, Texas.

In the matter of the expulsion of Dr James Kennedy from the West Texas Medical Association, it was resolved that the papers submitted disclose irregularities and non-conformities to their by-laws and constitution of such a gross character that we can not approve them without doing injustice to Dr. Kennedy; therefore we order that they be returned to the West Texas Medical Association for correction and legal adjudication at home before appealing to the Texas State Medical Association, and that Dr. Kennedy's proper recourse is, after due trial by the local association, to this association. [Signed] J. C. LOGGINS, M. D., Chairman.

TYLER, Texas, April 27, 1892.

Upon application, the following gentlemen have been duly elected: Dr. W. W. Pugh, 1885, Rusk, Cherokee county, Texas; Dr. S. L. Butler, 1874; Dr. H. L. Tate, 1869, Lindale, Smith county, Texas; Dr. M. C. Lynch, Carrol's Prairie, Hopkins county, Texas; Dr. M. Smith, Black Jack Grove, Hopkins county, Texas, 1891; Dr. M. H. Cravens, Arlington, Tarrant county, Texas, 1891; Dr. E. D. Capps, Fort Worth, 1891.

[Signed] F. M. PITTS, Secretary J. C.

Upon motion duly seconded, the reports were adopted.

Dr. James Kennedy made a few remarks, thanking the council for the careful investigation of his case.

The following telegram was then read:

NEW ORLEANS, Louisiana, April 26, 1892.

Dr. W. F. Wilkes, President, or members of Texas State Medical Association—We, the members of our beloved profession from Texas in attend-

ance at the New Orleans Polyclinic, in convention assembled, hereby send greetings, wishing you a most pleasant and profitable session.

[Signed] W. A. WOOD,
A. L. MONTGOMERY,
J. J. DIAL,
F. C. ERWIN,
J. N. WILLIAMS,
Committee on Resolutions.

I. W. SUTTLE, Secretary. T. W. WILEY, Chairman.

Dr. E. P. Becton moved, and his motion was duly seconded, that the secretary acknowledge the receipt of the telegram and tender the thanks of the association, and wish them Godspeed. Adopted.

The Section on Surgery was then called, but Dr. C. H. Wilkinson, of Galveston, chairman, being absent, Dr. E. P. Becton was appointed by the president as chairman.

Dr. C. F. Paine, the secretary of this section, being absent, Dr. Becton appointed Dr. J. D. Osborn as secretary.

Dr. Q. C. Smith, of Austin, delivered an extemporaneous address and exhibited instruments in connection with "Performing Lithotomy on a Small Boy."

The committee appointed to examine the report of the secretary made the following report:

Dr W. W. Wilkes, President Texas State Medical Association—We, your committee to whom was referred the report of the secretary, beg leave to recommend the adoption of the report, and also to recommend that the portion relating to the death of Dr. W. W. Reeves be properly drawn and forwarded to the widow of the deceased under the official seal of the association. Respectfully submitted. [Signed] C. M. ROSSER,
M. D. KNOX,
J. F. Y. PAINE.

On resumption of section work, Dr. Samuel E. Milliken, of New York, being introduced by Dr. Becton, exhibited colored illustrations and read a paper on "Radical Cure of Hernia." Bassinis method.

A vote of thanks was tendered Dr. Milliken by the association, and, upon motion, his paper was referred to the publishing committee.

Dr. J. W. Carhart read a paper on "A Case of Brain Surgery," which, upon motion, was referred to the committee on publication.

Dr. Irvin Pope, read a paper on "A Case of Supra Pubic Cystotomy; Removal of Median Lobe of Prostrate Gland; Death Fourteen Months After Operation." Upon motion, referred to committee on publication.

Dr. F. E. Daniel, of Austin, at the request of the chairman and of Dr. Cummings, of Austin, read a paper by Dr. J. Cummings on "Some Practical Work in the Surgical Treatment of the Liver." Upon motion, this paper was referred to the publishing committee.

Dr. Q. C. Smith, of Austin, offered the following resolution, which, upon motion, was referred to a committee, composed of Drs. B. H. Vaughan, John Preston, W. R. Blaylock, W. P. Burts and C. M. Rosser:

Resolved, That the ordinance appropriating the sum of $300 per annum to the use of the publication committee, in addition to the $200 salary paid the secretary, is hereby repealed.

Dr. Q. C. Smith also offered the following resolution, which, upon motion, was adopted:

Resolved, That the legislative committee of the Texas State Medical Association be and are hereby instructed to obtain permission, by general order from the managers of Texas railroads, for surgeons and physicians, when making professional visits, to be allowed to travel on *all trains* (at the traveler's sole risk on all but regular passenger trains), by paying for said travel at the usual passenger rates.

Dr. Q. C. Smith, of Austin, offered the following resolutions, which, upon motion, were laid on the table. (Proposed by Dr. Q. C. Smith at the Tyler meeting, 1892):

Resolved, That article 9 of the by-laws of the Texas State Medical Association shall be altered so as to read as follows:

SECTION 1. All elective officers of the association shall be nominated and elected from the body of the association assembled.

SEC. 2. No candidate shall be eligible to any elective office of the association who is not a paid up member in good standing for at least five consecutive years next previous to his nomination, and must have at-

tended three out of five meetings next preceding and including the meeting of said election.

SEC. 3. All elective officers and the place for the next meeting of the association to be elected by popular vote of the association at one general ballot; the respective candidates for each office who may receive the highest number of votes, as recorded by tellers appointed by the chair, to be declared duly elected.

SEC. 4. Only votes of paid up members in good standing be valid.

SEC. 5. The election for said purposes shall be the first business of the afternoon session of the second day's proceedings of the association.

SECOND DAY—*Afternoon Session.*

The president announced that memorial service will be held at 10:30 a. m., April 28, 1892.

The Section on Surgery being resumed, Dr. H. A. West read the chairman's (Dr. C. H. Wilkinson) address, entitled "The Status of Surgery To-day."

On motion of Dr. C. M. Rosser, the thanks of the association are tendered Dr. Wilkinson, and his paper is referred to the committee on publication.

The judicial council made the following report, which was adopted:

Elected honorary members: Dr. Joseph Price, Philadelphia, Pa.; Dr. Lewis S. McMurty, Louisville, Ky.; Dr. John C. Cardwell, Boston, Mass.; Dr. W. Gillman Thompson, New York; Dr. J. M. Keller, Hot Springs, Ark.; Dr. G. Frank Lydston, Chicago, Ill.; Dr. I. N. Love, St. Louis, Mo.; Dr. Samuel E. Milliken, New York.

Members elected: Dr. W. P. Collins, Warren, Tyler county, Texas, 1888; Dr. J. H. Earps, Corsicana, Texas, 1889; Dr. Clay Johnson, Corsicana, Texas, 1891; Dr. George W. Benton, Woodbury, Texas, 1878; Dr. T. B. Bass, Terrell, Texas, 1890; Dr. John T. Motley, Overton, Texas, 1885; Dr. W. P. White, Henderson, Texas, 1886.

By order of chairman. F. M. PITTS, JR., Secretary J. C.

The secretary read the credentials of Dr. Samuel Milliken as a delegate from the New York State Medical Association. On motion of Dr. Becton, Dr. Milliken was received as a guest of the Texas State Medical Association, and was accorded all the privileges of a member.

On motion of Dr. J. F. Y. Paine, Dr. J. F. Keller, of Hot Springs, Ark., was tendered the privileges of a member of this association, and was invited to participate in its deliberations.

The Section on Obstetrics was then called, but owing to the absence of Dr. J. T. Musick, chairman, and Dr. J. J. Dial, secretary, was passed for the present.

The Section on Medical Jurisprudence being called, and Dr. W. W. Reeves, chairman, being deceased, the president appointed the secretary, Dr. B. F. Church, to fill the chair.

Dr. N. B. Kennedy, of Hillsboro, Texas, read a paper entitled, "An Inebriate Asylum for Texas." After general and animated discussion, on motion, the paper was referred to the publication committee.

The committee to whom was referred the resolution offered by Dr. Q. C. Smith, of Austin, relating to the secretary's salary for the publication committee, made the following report:

President Texas State Medical Association—We, your committee to whom was referred the resolution of Dr. Q. C. Smith relating to the salary of the publishing committee, beg leave to report that, after carefully considering the resolution, we recommend that it be laid on the table.

Respectfully submitted, B. H. VAUGHAN, Chairman,
W. P. BURTS,
JOHN PRESTON,
W. R. BLAYLOCK,
C. M. ROSSER.

The secretary read the resignation of Dr. J. C. Adams, which, upon motion, was duly accepted.

The secretary read an invitation from the Tyler Fire Company, tendered the association, to witness an exhibition drill in the public square, Thursday, April 29, 1892, at 6 p. m.

There being no further business or reports under the Section on Medical Jurisprudence, the section adjourned.

The president made a temporary call for the Section on Gynecology, to enable Dr. Q. C. Smith to address the association on that section. Dr. Smith exhibited some instruments and made some remarks explaining their use.

The association adjourned at 5 p. m. until 9:30, Thursday, April 28, 1892. Approved.

W. H. WILKES, M. D., President.

H. A. WEST, M. D., Secretary.

THIRD DAY—*Morning Session.*

TYLER, Texas, April 26, 1892.

The president called the meeting to order at 9:45 a. m.

Prayer, by the Rev. A. J. Fawcett.

The minutes of the preceding day were read and, on motion, adopted.

The committee to whom was referred the president's annual report and message reported as follows, which was adopted:

To the Texas State Medical Association—Gentlemen: We, your committee to whom was referred the president's report and recommendations, respectfully report that we are heartily in accord with the paper, and recommend, first, that a committee of three be appointed to revise and codify our constitution and by-laws.

We recommend the adoption of the following resolutions:

First—WHEREAS, the interests of the public health are, or should be, paramount to any other interest in the social politics of an enlightened government; and,

WHEREAS, Said interests have obtained little or no official recognition from the national government, and there is no recognized head of that department of our economy; and,

WHEREAS, All other interests have separate bureaus or departments, with a chief honored with a seat in the President's cabinet; and,

WHEREAS, A memorial from the American Medical Association on this subject has been sent to Congress, praying that a bureau of public health be created, with an executive head who shall rank as a minister and have a voice in the cabinet; and,

WHEREAS, A bill has been introduced into the United States Senate embodying the subject matter of said memorial in detail;

Resolved, By the Texas State Medical Association, in convention at Tyler, Texas, April 26, 1892, that we most heartily indorse, approve and cordially urge upon the attention of Congress the said memorial, in view of the importance of the interests involved and the great and manifold benefits which we believe will be secured to the people of the United States by the passage of such a law.

Second—WHEREAS, The American Medical Association, at its last meeting, held in Washington City, did by viva voce vote repudiate the action of its nominating committee in the matter of selecting its next place of meeting, and changed said place of meeting from Hot Springs, Ark., to Detroit, Mich.; therefore, be it

Resolved, By the Texas State Medical Association, in convention at Tyler, Texas, April 28, 1892, that we learn of this action with regret, believing it to be detrimental to the best interests of organized medicine in general and of the American Medical Association in particular.

Resolved, That this association regards such action as unconstitutional and the precedent a bad one, and that we hereby respectfully protest against its repetition.

Resolved, That the act of taking out of the hands of its nominating committee the right and power of selecting the place of meeting strikes at the fundamental principle of the organized law of that body, said nominating committee being, under its constitution, composed of delegates from all American medical organizations in a manner best calculated to make that representation uniform and just.

Resolved, That a copy of this resolution be furnished the general secretary of the American Medical Association, and that it be also published in the medical press. Respectfully submitted,

E. P. BECTON,
J. L. CUNNINGHAM,
W. H. MONDAY.

Dr. J. W. Carhart offered the following resolution, which, upon motion, was received and adopted:

WHEREAS, The American Medical Association, at its meeting in Washington City in 1891, did sanction the holding of a Pan-American Medical Congress, and to carry out the magnificent conception did appoint a committee on permanent organization; and,

WHEREAS, That committee has already accomplished a vast amount of work in carrying out the purposes of the American Medical Association with regard to the congress, and assurances are given of the hearty cooperation of the profession of medicine in every government on the American continent, and also the aid and support of the government officials at Washington; therefore, be it

Resolved, That the Texas State Medical Association most heartily indorses this effort of the American Medical Association to accomplish so splendid a purpose as the unifying of the medical profession on this entire continent by holding said congress in 1893, the year of the Columbian Centennial Exposition, with a view of the establishment of a uniform system of sanitation and quarantine in all the countries of the continent.

Resolved, That we, the members of this body, pledge our hearty support to the carrying out of the purposes of the congress, and that, so far as practicable, we will register as members and attend the meeting in Washington in September, 1893.

Dr. J. D. Burch offered the following resolution, which upon motion duly seconded, was received and adopted:

WHEREAS, There is an institution of learning in this State, fostered by the State, that is an honor to it in the ability of its faculty and the high standing of learning required; therefore, be it

Resolved, That it is the sense of this association that our hands should be outstretched on all occasions for the upbuilding of its best interests and in sustaining the faculty of the medical department of the University of Texas, located at Galveston, Texas.

The Section on State Medicine and Public Hygiene being called, Dr. J. L. Cunningham, chairman, and Dr. J. D. Osborn, secretary, both being present, the section proceeded to business.

Dr. J. L. Cunningham read his address to the section, which, upon motion was referred to the committee on publication.

Memorial services were held, Dr. J. W. Carhart in the chair. Eulogistic speeches were made by Drs. Carhart, H. A. West, John Preston and E. P. Becton, as follows:

DR. J. W. CARHART'S ADDRESS.

Fellow Members—Two years ago at our annual meeting at Fort Worth it was thought by a number of the members of this association that we were derelict in regard to the observance of proper services in commemoration of the deceased members of the body who had died during the previous year, and it was decided at that meeting that at subsequent meetings of this association the president should, on the first day of the meeting, appoint an hour for memorial services during the session. This was carried out at the last meeting at Waco. In accordance with those requirements and usage, we pause here today at this hour in our business and care, and stopping for a short time—an hour at the longest—to speak of those honorable men who have fallen at their posts during the year that has passed.

We are reminded that no organized body of men, legislative, judicial, scientific, literary, social or religious, but will do this on proper occasions; they hold memorial services in remembrance of the deceased members of their respective bodies, and it is right; it is proper. We should not lose

sight of the obligations we are under one to another, and I am satisfied that this memorial service—the recalling of the past, our relation to our fallen brethren, our common trials, our struggles, our hardships and our sufferings—will have the tendency during this hour to cement our hearts in closer union. It will have the tendency to allay any feelings of disturbance that may exist between us; any unseeming strife or ambition, and lead us to feel that we are brothers on a common plane, and united by ties that are more tender and delicate than those of most men under ordinary circumstances in life. Not only this; but I am satisfied that this service will have the tendency to exalt our noble profession and its members in the estimation of the world.

If when a brother, a worker, in this, the noblest of all professions, falls at his post, we, his comrades and companions, rush on in the struggle and forget and pause not to speak one solitary word in commendation of his memory, the world has a right to feel that the ties that bind us together are of the flimsiest character.

Some noble men have fallen during the past year, and there are gentlemen here who knew them well, and we will call on them to speak in regard to the fallen ones.

I have requested Dr. E. P. Becton to conclude the remarks of this service. I failed to see him yesterday, and only today requested him to speak on the occasion. I have spoken to one or two other gentlemen to make remarks here this morning, and shall be glad to hear from any who knew those men who have died to come forward and speak on this occasion. If the secretary will favor us with the names of the deceased, we will be obliged.

Secretary H. A. West read the names, as follows: Our loss from death include Dr. T. S. Burke, of Corpus Christi, who died September 21, 1891; Dr. W. T. Strain, of Wills Point, who died November 1, 1891; Dr. W. W. Reeves, of Austin, who was killed December 29, 1891, and Dr. T. M. Stone, of Jasper, who died January 18, 1892. There may have been other deaths, but these are the only ones known to me.

Dr. West then repeated that portion of his report referring to the death of Dr. Reeves.

Dr. John Preston then took the stand and made the following address:

DR. JOHN PRESTON'S ADDRESS.

Being in the same line of work as that which Dr. W. W. Reeves was engaged in at the time of his death, I have thought it my duty to express my views of his worth as a man and physician. I knew Dr. Reeves but

one short year. Called from the active duty of a general practitioner, he entered upon those of superintendent of a great charity, with no fears of failure, but with a laudable ambition to add new laurels to his fame and to make the State Lunatic asylum at Austin one of the most attractive homes for the most unfortunate of our fellow beings in our beautiful land of the south. To this end he bent all the energies of his daily life. Kind and gentle in his manners, affable and genial in his disposition, he possessed innate qualities for this peculiar work that were rare indeed and soon endeared him to all with whom he came in contact, and especially to the poor helpless beings under his care whose very lives were dependent on his skill and whose hopes of a restoration of their minds were based upon every movement and word of their superintendent. Naturally skillful, he had spared no pains or means in adding to his knowledge and in perfecting himself in all that pertained to the healing art. Being an accomplished and progressive physician, it was not difficult for him to assume the duties of his new work. In the brief period of his superintendency he had already made many improvements in the conduct of the asylum and added new comforts to the home of the insane. As a man, Dr. Reeves was decided in his views and positive in his actions, and yet the sunbeam of kindness and gentleness shone forth from every feature of his benign countenance in such splendor that no one doubted his honesty or the uprightness of his decisions. He was, therefore, well equipped for the work in which he engaged. But he had one fault; he was entirely devoid of fear. Self-preservat on was no object with him; where duty led he followed. In an unhappy moment he yielded to the importunity of an unfortunate fellow-man—an outcast, without home, without work, without food; feared by his fellow-men, all doors were closed against him. As many discharged prisoners had done before, he returned to his dungeon, seeking a place of rest. He had been discharged; he could not be admitted; but from the kindness of Dr. Reeves' heart the problem was solved, and some light work was given him. His insanity returned, and, as is characteristic of many of his class, he turned against his benefactor first, and murdered him in an instant. So went out a life that was pure, and its owner was called to appear before a tribunal whose decisions, we are told, are ever just, yet tempered by mercy. He is gone; but so long as one ray of light brightens up the dark cavity of the brains of the unfortunates who were under his care, so long will his praise be sung; and so long as one of his neighbors survive, he will live bright in their memories.

DR. B. A. FOWLER'S ADDRESS.

I was acquainted with Dr. Reeves in northeast Texas for several years. He became quite a close friend of mine, and we remained such until his death. Throughout northeast Texas, through his wide acquaintance, he

was dearly beloved by every one. He was a man that won friends wherever he went, and professionally and socially he was a man universally admired by all. But, last of all, he honored me with a three days' visit, and while there he promised us that he would return during the holidays and go hunting and fishing with us. On the 28th day of December I received a letter from him saying that owing to the rush of business life he would necessarily have to postpone his visit until some future day. On the 29th of December I received a telegram bearing the sad intelligence of his assassination. This was sad to me indeed. On the first day I started to Austin to see the body, but learning that it was already on the way to northeast Texas, and not seeing how I could meet it, I did not take the trip.

Dr. Reeves was a man with the highest aspirations, which can never be reached on account of his untimely death. In his death his wife has lost a loving husband, his children a caressing father, and the State of Texas and the medical profession an aspiring member.

At the conclusion of Dr. Fowler's remarks Dr. E. P. Becton, who had been selected to deliver the closing address, made the following:

DR. E. P. BECTON'S ADDRESS.

When a gentleman presents himself before an intelligent audience like this it carries with it a reasonable presumption that he is prepared to say something that will interest them. About forty minutes ago I was first notified that I must say something; I will therefore have to trust to the inspiration of the moment for whatever I may be able to say now. I wish I had been notified earlier, that I might have prepared something worthy of your attention.

To me this is a solemn hour. The afflictive hand of Providence has rested heavily upon me; I know what sorrow is; I know how to sympathize with those who are in trouble

One year ago four of our fellow members were with us in the enjoyment of health, of happiness and of the privileges and pleasures that we this day enjoy. Now, they sweetly sleep beneath the shade of the trees on the other side of the river. Life's duty done, they have no more to do with the things of earth; their lives, like ours, were hard, hard ones. Those who live in the cities, where everything is well regulated, have comparatively an easy time. Not so with the Texas country doctor. He goes at midnight hour, amid the raging storms, exposed to the dangers of the lightning's flash; goes at midsummer, exposed to the burning rays of the summer's sun; and even the surging waters deter him not from the discharge of his duty. How often these brethren had done this; how often

were they saddened over the disappointments and vexations incident to human life; how seldom did they, and how seldom do we, receive the words of encouragement that we sometimes so long for. But when they do come, they come with a perennial freshness; they fall as gently as the dews of heaven upon the tender flower, and sink as softly into our hearts as the prophet's prayer for the redemption of his people. But the supreme moment came, and all that was left for them to do was to bid farewell to the wife and the little ones, sunder the ties that bound them to earth and cross over the river to the great beyond. Let us indulge the fond hope that they looked back on a life well spent in the faithful discharge of every duty.

The tragic death of Dr. Reeves strikes our hearts heavily. A noble specimen of humanity; a man of splendid physique, bold, fearless, courageous, yet gentle and lovable as a woman. He had risen to the zenith of his glory, and had been honored by this association, and also by the Governor of Texas, and was then filling a position with credit to himself and profit to the unfortunate inmates there. While in the discharge of duty he was suddenly cut down by the assassin's bullet. See that man stricken down, his life's blood pouring out at the openings made by the deadly bullet. Can you imagine the overwhelming grief of that dear woman when the wires flashed the news that her husband was dead? He, around whom clustered all the love of her pure heart; in whom centered all her hopes of earthly happiness, now cold in death! That tongue that had whispered such sweet words of affectionate regard and consolation during life, now cold and still in death! That heart that beat in harmony, in unison and in sympathy with hers, every impulse of which was as true to her and to right as the needle to the poles, now cold and still in death! God, in mercy, pity that woman and the fatherless children!

Let us indulge the fond hope that these four brethren, dying with harness on, having faithfully discharged the duties of life, that their immortal spirits leaped from the cold waves of the Jordan of death, scaled the highest battlements of the celestial city, and this moment are a part of the brightest of the coruscating retinue that vie around the blazing throne of the eternal God. And if the spirits of that pure land are permitted to take cognizance of the things of earth, methinks that theirs this moment hover over this association and send back to heaven the prayer that we all may be reunited in that pure land where the undimmed eye is lost in visions of future glory, and there forever spend the "Sweet Bye and Bye."

At the closing of memorial services the following report of the judicial council was read and adopted:

W. H. Wilkes, President Texas State Medical Association—Dr. J. R. Terrell, of Waco, and A. F. O'Bryan, of Longview, have been duly elected to membership in this association. [Signed] J. C. J. KING, Secretary.

Dr. Richardson was enrolled as a delegate from the East Texas Medical Association; F. E. Daniel and Q. C. Smith from the Travis County Association, and J. F. Dean and T. J. Bennett from the Austin District Association. [Signed] J. C. J. KING, Secretary.

The judicial council have elected to membership L. Ashton, of Dallas.
[Signed] J. C. LOGGINS, President Council.
J. C. J. KING, Secretary.

A recess of ten minutes was had to arrange the list of the nominating committee. Upon reconvening, the following list was submitted as the nominating committee:

J. R. Martin, Hays county.
B. A. Fowler, Brown county.
W. B. Newland, Coryell county.
T. E. Clark, Fayette county.
John Preston, Kaufman county.
P. C. Coleman, Mitchell county.
F. W. Swindell, Wood county.
E. P. Becton, Hopkins county.
R. E Moody, Nolan county.
A. B. Gardner, Austin county.
W. P. Burts, Tarrant county.
J. P. Tucker, Rusk county.
James Kennedy, Bexar county.
R. W. Knox, Hains county.
M. T. Emanuel, Parker county.
T. P. Davis, Van Zandt county.
J. S. Black, Titus county.
W. W. Pugh, Cherokee county.
Taylor Hudson, Bell county.
S. Bowers, Washington county.
J. C. Loggins, Ellis county.
W. P. Callen, Tyler county.
F. H. Stallcup, Marion county.
B. E. Sellman, Madison county.
W. T. Evans, Leon county.
E. E. Leek, Shelby county.
T. W. Conerly, Cass county.
A. N. Perkins, Jefferson county.
F. C. Ford, Nacogdoches county.
W. P. Powell, Montgomery county.
E. T. Walker, Trinity county.
H. A. West, Galveston county.
W. H. Lancaster, Lavaca county.
Irvin Pope, Smith county.
L. B. Roebuck, Hill county.
J. I. L. Gray, Limestone county.
G. R. Foscue, McLennan county.
J. H. Reuss, DeWitt county.
J. D. Burch, Wise county.
F. A. Miller, Navarro county.
T. J. Tyner, Travis county.
A. F. O'Bryan, Gregg county.
C. M. Rosser, Dallas county.
J. W. Carhart, Lampasas county.
C. B. Rains, Palo Pinto county.

On call of different sections, it being found that none of the officers were present, upon motion, adjournment was had until 2 p. m.

THIRD DAY—*Afternoon Session.*

The association was called to order at 2 p. m.

Dr. E. P. Becton announced the nominating committee ready to report, and Dr. C. M. Rosser, secretary, read the following, which, upon motion, was received and adopted:

Dr. W. W. Wilkes, President Texas State Medical Association—We, your committee on nominations, beg leave to report nomination as follows:

President.....Dr. J. D. Osborn, of Cleburne.
First Vice President..... .... Dr. T. J. Bell, of Tyler.
Second Vice President.....Dr. F. M. Pitts, Jr., of Hubbard City.
Third Vice President..... ....Dr. T. J. Bennett, of Austin.

To fill vacancies on the judicial council—Dr. M. T. Emanuel, of Weatherford; Dr. J. P. Tucker, of Overton; Dr. B. A. Fowler, of Brownwood; Dr. A. W. Fly, of Galveston.

Section on Practice of Medicine—Dr. J. C. Loggins, of Ennis, chairman; Dr. Clay Johnson, of Corsicana, secretary.

Section of Obstetrics and Diseases—Dr. Irwin Pope, of Tyler, chairman; Dr. E. K. McKinzie, of Tyler, secretary.

Section of Surgery—Dr. A. B. Gardner, of Bellville, chairman; Dr. M. Smith, of Hopkins county, secretary.

Section of Medical Jurisprudence and Psychology—Dr. John Preston, of Terrell, chairman; Dr. B. M. Worsham, of Austin, secretary.

Section of State Medicine and Hygiene—Dr. C. M. Rosser, of Dallas, chairman; Dr. J. L. Letcher, of Dallas, secretary.

Section of Gynecology—Dr. J. F. Y. Paine, of Galveston, chairman; Dr. George Lee, of Galveston, secretary.

Section of Opthalmology and Otology—Dr. G. P. Hall, of Galveston, chairman; Dr. W. H. Baldinger, of Galveston, secretary.

Section of Dermatology—Dr. R. W. Knox, of Houston, chairman; Dr. H. P. Cooke, of Galveston, secretary.

Committee on Publication—Drs. West, Paine and Cooke, of Galveston.

Committee on Necrology—Dr. J. W. Carhart, of Lampasas, chairman; Dr. T. D. Wooten, of Austin, secretary.

Committee on Microscopy and Pathology—Dr. J. W. McLaughlin, of Austin, chairman; Dr. W. R. Blaylock, of McGregor; Dr. Tyner, of Austin.

Committee on State Board of Health—Dr. R. M. Swearingen, of Austin; he to appoint four assistants.

Place of next meeting, Galveston.

Time of holding next meeting, first Tuesday in May, 1893.

Committee on Arrangements—Dr. H. A. West, Galveston, chairman.

Delegates to the American Medical Association—M. C. Linch, Carrols Prairie; B. M. Worsham, Austin; C. M. Rosser, Dallas; W. P. Burts, Fort Worth; W. A. Duringer, Fort Worth; M. D. Knox, Hillsboro.

[Signed] E. P. BECTON, Chairman
C. M. ROSSER, Secretary.

Drs. E. P. Becton and C. M. Rosser were appointed to conduct the new president, Dr. J. D. Osborn, to the chair, who made the following address:

Gentlemen of the Texas State Medical Association—Nine years ago, in this beautiful city of Tyler, you saw fit to place me in a position of trust. In the long years succeeding you have seen the fight I have made for the high standard of medicine. And today you have honored me by placing upon me the highest position of trust in your power. I hope you will never have cause to regret the same, and that this arm of mine will wither and decay whenever I fail to do my duty for the high standard of medicine. I can not promise you an address in the eloquence of my gifted friend, Becton, but I do promise you to work in this organization, our beloved association, and to do all in my power for its advancement, and I thank God today we are once more together, a compact and harmonious body.

Dr. T. J. Bell was then conducted to the chair and introduced by Dr. Burroughs. Dr. Bell said:

Gentlemen of the Texas State Medical Association—It is not necessary for me to say to you today that I appreciate this honor conferred upon me. Since I have been a member of this association I have endeavored to fulfill every duty placed upon me to the best of my ability At Galveston, in 1888, the nominating committee placed me upon the judicial council; from that time up to the meeting at Waco last year I served uninterruptedly in that position. At Waco, at the last meeting, you, gentlemen, honored me with the position of chairman of the Section of Practice, and it is not for me to say how well I have filled that position. Now I am here to say to you that I thank you for this honor conferred upon me, and I fully appreciate the kindness and esteem manifested to me by my friends—and I believe you are all my friends—and I will endeavor, to the best of my ability, while I occupy this position, to fill it with honor to the association and credit to the profession. I thank you for this manifestation of your kindness and esteem.

Drs. Ashton, of Dallas, and Starley, of Tyler, then conducted Dr. F. M. Pitts, Jr., to the chair. Dr. Pitts said:

Gentlemen—I thank you for the honor you have conferred upon me, and assure you I will endeavor in every way to merit your confidence and esteem.

Drs. G. B. Foscue, of Waco, and W. P. Burts, of Fort Worth, then introduced Dr. T. J. Bennett, of Austin, who said:

Gentlemen—I am grateful, of course, for this honor.

Dr. W. H. Wilkes, the retiring president, then said:

Allow me to thank the members of the association for the constant courtesy and consideration they have shown me as presiding officer. I am confident they will show the same to Dr. Osborn, and in that case he will have no cause to complain.

Dr. Wilkes then handed the gavel over to his successor, Dr. J. D. Osborn.

On motion of Dr. E. P. Becton, the association tendered its thanks to the retiring president, Dr. Wilkes, for the able manner in which he has presided over the meetings.

Dr. E. P. Becton introduced the following resolution, which, upon motion, was duly adopted:

WHEREAS, With a view to attesting the deep interest the Texas State Medical Association entertains for the medical department of the University of Texas, be it

Resolved, That it will annually hereafter award to the graduates winning the Faculty medal a gold medal, to be known as the Texas State Medical Association medal.

Dr. H. A. West, of Galveston:

Mr. President and Gentlemen of the Association—On behalf of the faculty of the medical school of the University, and representing my colleagues upon this occasion, I desire to express our hearty thanks and high appreciation of this substantial evidence of your interest in the earnest effort we are making to elevate the standard of medical education in the adoption of an entrance examination, a seven months term, a three years graded course of instruction, and judicious combination of didactic, tutorial, laboratory and practical teaching. We feel that we deserve and should receive the undivided support of the medical profession of Texas. This is, indeed, your institution as well as ours. It is a duty you owe to yourselves to lend us every aid and encouragement in your power. I can assure you that of all the honors to be won by future students of the medical school that none will be so highly prized as that which bears the stamp of the Medical Association of the State of Texas.

The Section on Gynecology was then called. The chairman, Dr. F. H. Nott, and secretary, H. D. Fountain, were noted as absent. No reports or papers were offered.

The Section on Opthalmology and Otology being called, the chairman, Dr. R. C. Hodges, and secretary, Ed. Randall, were noted as absent.

Under this section Dr. H. L. Hilgartner read a paper on "Asthenopia Due to Muscular Insufficiency." On motion, this paper was referred to the publishing committee.

The Section on Dermatology being called, Dr. C. M. Rosser was appointed as secretary.

Dr. R. W. Knox, chairman, read his report and address on dermatology. After discussion, by Dr. Keller, of Hot Springs, on motion, a vote of thanks was tendered Dr. Knox for his able paper, and the same was referred to the publishing committee.

The Section on State Medicine and Public Hygiene was recalled, and, upon request of the association, Dr. J. F. Y. Paine, of Galveston, read an address delivered at the recent commencement exercises of the medical school upon "Medical Education." On motion, it was referred to the committee on publication.

The Section on Practice and Medicine being called, Dr. James Kennedy, of San Antonio, spoke on Dr. West's paper, which was read on the second day.

Dr. W. B. Brooks read a paper entitled "The Morphine Habit," which, after discussion by Drs. White, Sears and King, Powell, and answered by W. B. Brooks, was referred to the publishing committee.

On motion, all papers not read, their authors being absent, were read by caption and referred to the publishing committee.

The president announced the request of a photographer that members of the association meet this evening to be photographed.

The president announced that ex-President Wilkes will deliver his address tonight in this hall.

The following resolution was offered and unanimously adopted by the association:

With a lingering taste of ambrosial delicacies, a dream of sweet music and fair ladies from flower-decked bowers, and under the refining and ennobling influence of Tyler's social circles, be it

Resolved, That the Texas State Medical Association hereby expresses its hearty appreciation of the courtesies extended its members by the citizens of Tyler, especially the ladies, and pledges its future kindest remembrance.

[Signed] F. M. PITTS, JR.,
J. C. J. KING.

President Osborn addressed the association in regard to officers of sections, stated that if any appointee felt he could not perform the duties of the office, he had best resign, and let some one else be appointed.

The president announced that there would be a meeting tonight for the purpose of organizing an association on State Public Health, in the National Hotel.

President Osborn appointed as a committee to codify the constitution and by-laws, as suggested by President Wilkes in his annual address, the following: J. H. Sears, chairman; J. C. J. King, J. F. Y. Paine and H. A. West.

On motion, the reading of the minutes was dispensed with.

It was moved and seconded that the association adjourn until the first Tuesday in May, 1893. Carried, and the meeting adjourned. Approved.

J. W. OSBORN, M. D., President.

H. A. WEST, M. D., Secretary.

PAPERS

READ BEFORE THE

TWENTY-FOURTH ANNUAL MEETING

OF

THE TEXAS STATE MEDICAL ASSOCIATION.

TYLER, TEXAS,

April 26th, 27th and 28th, 1892.

SECTION ON PRACTICE OF MEDICINE, MATERIA MEDICA AND PATHOLOGY.

ADDRESS BY T. J. BELL, M. D.,

CHAIRMAN.

This is truly an age of progress in almost every department of life. If we take a retrospective view of the years that are gone by—the history of each fraught with acts and deeds unprecedented, or skillful exploits wonderful to relate—the careful, earnest investigator after truth may easily discover that within the last quarter of a century, both in arts and sciences, have been developed and brought to light by those whom God has endowed with great minds, more of the truths that had been hidden behind what was thought to be the impenetrable veil of mystery or beyond the capacity of the finite mind to discover than for many years previous. And as we travel along with eager and watchful eye down the track of time until we reach the year 1892, we pause for a while, and as we turn to look upon the road over which we have traveled, we see the way strewn with deeds remarkable, and discoveries and developments that have not been surpassed in former years.

Among the many new discoveries in the arts in the last few years I will only mention a few of the most important. There are the manufacturing of many useful articles out of paper, such as car wheels, vessels for containing liquids and even houses are being built entirely of paper. Instruments of locomotion and navigation have been invented—wonderful things. Even the air, that vast ethereal space above and around us, is said to not have escaped invasion, and, whether altogether suc-

cessful or not up to the present time, the discovery has been made, and some of us, perhaps, will live to see the mighty ships plowing through the air as we can now see the great vessels ploughing the mighty deep.

Then, in motive power, some of the most wonderful discoveries have been made and some of the most wonderful achievements have been accomplished. Little did Franklin, perhaps, imagine when he, the first to chain the lightning and bring it, the greatest force the world has ever known, within the management and control of man, that it would one day be utilized as the grandest motive power ever to be discovered. Today that silent force, a force the passing of whose current it is impossible to detect by the most sensitive ear, aided by the most perfect stethescopes, and whose presence has never been discovered by the most perfect eye, aided by the most powerful microscope; neither has any man yet been able successfully to calculate the rapidity of its movement—is revolutionizing the world. By it street railroads are being successfully operated; by it trainloads of merchandise or of human beings are being transported from city to city, and the time, we believe, is not far distant when railroads whose trains will speed through the country drawn or propelled by electricity will belt this continent.

By that same indescribable, undiscernable, and, I might say, incomprehensible force or principle is our city being lighted, and the recent discoveries and electrical wonders in the telephone, the phonograph, and more recently, we understand, an instrument by which not only sounds, but scenes may be transmitted and reproduced, are all wonderful inventions and are productions of Mr. Edison, the greatest electrician of any age, I suppose.

If these were all the advances made by the study and manipulation of electricity, it would even then be wonderful, but the use of electricity in medicine has perhaps made more progress than in any of the other purposes to which it has been applied. It is now being used extensively in the treatment of functional

neuroses, as well as in organic diseases of the nervous system. In cases of neuræsthenia, complicated with more or less hysteria, this agent has been found to act as a sedative. Cases reported by Geo. H. Washburne and others, the application to which of electricity always produces sleep; and some cases of obstinate sleeplessness were much relieved by galvanism. I have under my treatment at this time a lady who has been a sufferer for a long time with cervical and corporeal endo-metritis and in whom one of the most distressing symptoms at times is a most excruciating frontal headache, and quite frequently have applied the galvanic current to relieve this pain, and in a few minutes she would say: "I am so sleepy."

In organic lesions of the nervous system, electro-theraphy has gained in the last few years many warm advocates; and it is believed that in cases of cerebral paralysis, or paralysis induced by intracranial hemorrhage, where the nerve fibres are only slightly injured, they may be readily restored and a cure effected by the timely and judicious application of the galvanic current. In cutaneous and venereal diseases, eczema, herpes, boils, carbuncles and chancres, chancroids, stricture and gleet, electricity has been found a valuable agent. John Duncan and Lacaille report cases of goitre cured by electrolysis, and all erectile tumors, especially about the face, have been successfully treated by electrolysis.

Greater achievements have been enjoyed in gynecology, perhaps, than in any other branch of the profession by electricity.

Apostoli, of Paris, has perhaps had more experience with electricity in gynecological practice than any other man living, and we find his methods of treatment endorsed by such men as Spencer Wells, Keith, Playfair and Engleman of St. Louis. "The electric treatment of diseases of women," says Engleman, "is a distinct addition to our means of dealing with some of these obstinate ailments. Apostoli's method rests upon a strictly scientific basis, and is employed in a strictly scientific manner. The results which have been obtained by it appear to excel essentially the results of other methods of treatment. The results

in cases of myoma are such that, considering the uncertainty of other methods of treatment and the high mortality of hysterectomy, we must welcome any additional aid in the hope of possibly avoiding the danger of operation.

"Many of the diseases of women, especially metritis, endo and peri-metritis, as well as inflamation of the adnexa, appear theoretically to be suitable for electric treatment and have proven so in practice."

And now, with this brief *resume* of this very potent therapeutical agent, I pass on to consider other therapeutical agents—pharmaceutical preparations—which are more in accord with the subject upon which I was expected to prepare this paper.

There have been, in the last twelve or eighteen months, discovered, or at least presented to the profession, quite a number of new antipyretics, principally preparations from coal tar, and verily it looks as if coal tar, like the trickster's bag, which by some mysterious hocus-pocus manipulation can be made to produce anything that may be desired, will ere long furnish the therapeutist with all that may be necessary to the abolition of pain or the dissolution of disease.

Antipyrine, phenactine and acetanalid are all too familiar to the profession to make it necessary to more than mention them. Antikamnia, I believe, is about the next in order of antipyretics, and it is claimed by the manufacturers, the Antikamnia Chemical Company, of St. Louis, to be superior to either of the preparations above mentioned as an antipyretic, analgesic or anodyne. I was induced by my friend and class-mate, Dr. Jessup, to give it a trial, and I must say that in many cases it fulfilled the indications more satisfactorily than either of the coal tar products, which had been earlier introduced, reducing temperature decidedly when desired, relieving pain and producing a calmative influence in a few minutes. Some contend, however, that antikamnia is nothing more nor less than acetanalid and bicarbsoda combined, and just now my attention is attracted by an examination of this new preparation in the

Druggists' Circular and Chemical Gazette of May, 1891, by William A. Hall, who gives the analysis as follows:

Acetanalid	77.55
Nahco 3	19.32
Nac 1	1.30
Na 2, So. 4 10, H. 2 0	0.83
Moisture	0.80
Loss	0.20

and he has concluded that the improvement derived from the addition of soda to the acetanalid consists perhaps in the greater solubility of the compound, some might think the advantage consisted in profit to the manufacturers. The price is one great drawback to the preparation. Phenocol-hydrochloride is a new antipyretic which is being introduced to the profession and is said to possess advantages over either of the other preparations, owing to the fact as stated that it is comparatively freely soluable in water. "Dr. Hartel," says the Provincial Medical Journal of May, 1891, "administered it beneficially in cases of phthisis and rheumatism, especially in the latter disease. He gave as much as seventy-five grains during the day in fifteen grain doses in acute rheumatism and noted that on the day following the beginning of the phencol treatment improvement was the result, and after about four days the joints were quite painless." The author states that in none of these cases of articular rheumatism did the remedy seem to have any notable effect upon the temperature—the fever generally left the patient simultaneously with the appearance of general improvement. It is said to be rapidly excreted.

And then we have, claiming our attention more recently, two other coal tar derivatives, antalgia and catalgine, both claiming to be antipyretics and analgesics of the first order. Exalgine, a recently reported analgesic, derived, we suppose, from coal tar like the rest, is perhaps also antipyretic and anodyne. It is thought by some that it will in the near future displace antipyrine, when analgesic effects alone are desired or indicated. In the Medical Press of July 22, 1891, a writer says that the

experiments which have been made by incautious dispensing chemists, at home and abroad, in reference to the toxic effects obtainable by egregious overdoses of this, the latest analgesic, tend to show that it is far from possessing the power for evil which its detractors have endeavored to fasten upon it; that a man somewhere in France survived a dose of more than a drachm and concludes that no bad effect need therefore be apprehended from the very moderate doses of from one to five grains which obtain in this country.

Somnal is a new hypnotic which is now attracting the attention of the profession. Dr. Thompson, in the New York Medical Journal of November 29, 1890, deduces the following conclusions after considerable experience with this drug: "The effects of somnal are much more striking and certain than those of urethane and far less depressing than those of chloral—no vertigo or depression, such as may follow the use of sulfonal. The action is usually very prompt and for ordinary insomnia it is a safe and reliable hypnotic, but not powerful enough to decidedly control delirium tremens, maniacal delirium or severe pain." I have not used it myself and would be glad to hear the experience of any gentleman who has used it.

Pentol is the name of the newest anæsthetic and was introduced by Prof. Von Mering, of the Medical Polyclinic, in Halle. It is a production from amyl-alcohol, and said to be very volatile and easily combustible. The writer in the Lancet of October 10, 1891, advises the administration of it the same as chloroform and defines the effect, which may be obtained in three or four minutes as not very deep, but sufficiently so for small operations, and says it is neither accompanied or followed by any unpleasant effects.

The profession will certainly owe everlasting gratitude to him who will produce an anæsthetic that is entirely void of harm.

Many, many are the new remedies and therapeutical agents and new applications of old therapeutical agents that have claimed our attention within the last year, and while some of our brethren are inclined to ignore or discard entirely "new

remedies," I am convinced that the rapid progress that medicine has made in the last decade or two is due to the fact that the more progressive men in our profession have endeavored to get out of the old ruts in which the wheels of our science have been dragging heavily for centuries, and are reaching out after some agent or remedy that will more readily alleviate the suffering of humanity and at the same time lighten their own burdens. And while many of these so called "new remedies" are worthless, and will very soon take their place alongside hundreds and thousands of their kind "that have been weighed in the balance and found wanting," yet many of them are valuable, and by the wise and judicious application of some of these newly discovered agents many of the disappointments and annoyances to which our forefathers were subjected in the plying of their profession have been taken out of the way, and we have been relieved of many perplexing problems.

Who will say that the great Lister has been less a benefactor to mankind than was the world-renowned Jenner when he discovered vaccination to be a prophylaxis against smallpox? Truth is, the application of the results of Lister's earnest investigation have done and will do more to alleviate the suffering of humanity than any discovery that has yet been made, for the reason that, following up Lister's theory, not only the use of antiseptics in surgery, but in the practice of medicine in all its branches, is growing more and more in favor with the profession, and its benificent results are being discovered even by the laity, and the lives of hundreds of the human race are being saved daily by the practical application of this salient principle.

It is unnecessary for me, in this paper, to write at length upon the different theories which have been from time to time advanced upon sepsis and antisepsis, and indeed 'twould be beyond the scope of this paper and presuming upon the ignorance of this intelligent body for me to underkate to theorize upon the *modus operandi* of antiseptics in the treatment of disease. Suffice it to say, we believe the inauguration of the use of antiseptics in surgery, gynecology, obstetrics, and in fact in general medicine,

has done more than any other discovery in medicine to remove from the sick-room and lying-in-room and surgical ward's horrors which we as physicians were in former years called upon to witness, and which we were to a very limited degree able to counteract or dispel. Improvements and discoveries in this class of remedial agents have not lagged behind, but have kept pace with the general progress so apparent in all classes of therapeutical agents, as well as in all the departments of the medical profession. It will be very hard to displace the bichloride of mercury as a general and local antiseptic; also the peroxide of hydrogen, which has been used for so long with such favorable results by so many eminent in the profession, will be very hard to displace by any of the newly discovered antiseptics: few if any of the many reputed antiseptics now in use that will so perfectly and throroughly destroy pus corpuscles as the peroxide of hydrogen: and for this reason, if for no other, it would be hard to set it aside. As local antiseptics, C. E. Black calls attention in the Medical News, of December the 20th, 1890, to the essential oils. He gives the results of experiments made with some of the antiseptics which are in common use with cultures of micro-organism submitted to the action of drugs in solutions of known strength for definite periods of time. Carbolic acid was found effective in the proportion of 1 of the acids to 300 of the culture-medium, in which the microbes were growing; bichloride-mercury, 1 to 25,000; oil of cassia, 1 to 5,000; oil of cinnamon, 1 to 2,000; oil cloves, 1 to 1,200; oil turpentine, 1 to 1,600. Thus it will be seen that the mercuric-chloride is the most effective antiseptic, but owing to its corrosive and poisonous qualities it is not so desirable as a universal antiseptic. Next in power to mercuric-chloride, is oil of cassia, which is commonly sold in drug stores as oil of cinnamon. He recites cases of wounds, abscesses, and necroses, etc., in which he had used the oil of cassia with flattering results. Then comes the other essential oils, boracic acid creolin, and so on and on *ad infinitum*, until when we come to survey the field of antiseptics their name

is legion: indeed it seems the bent of pharmaceutical research, for the past three or four years at least, has been to a great degree towards antiseptics, antipyretics, analgesics, and anæsthetics: and although I might consume the entire time allotted to the reading of this paper in enumerating these and theorizing upon them and giving the views and experience of others in their use, as well as upon other newly discovered pharmaceutical preparations, I do not believe that I would be fulfilling the requirement of my position as chairman of the Section of Practice, Materia Medica, etc., were I to do so. I will therefore dispatch this part of my subject and devote the balance of this paper in considering some of the advances and discoveries made in the practice of medicine.

When we come to consider the progress made in the practice of medicine, or rather the improvements made in diagnosis, prognosis, and treatment of disease, as well as the new diseases or symptoms that have been discovered within the last few years, we are impressed that this is truly an age of progress.

There were those in olden times who believed that the baser metals might be converted into gold by some as yet undiscovered agency, and we are told that alchemists spent their lives in vain searching for the "philosopher's stone" in order to effect this wonderful transformation and much coveted result. And there are those who now claim that the search for positive or specific remedies against disease will be equally in vain. But we believe that as our knowledge in physiology and pathology increases, and we are thereby enabled to discover disease and the cause of disease, we will certainly sooner or later be able to discover the antidote.

The last two years have witnessed the birth and death of many "sure cures" for the different ailments of the human race, even the elixir of life was thought to have been discovered, and doubtless the blasted hope of the would-be discoverer has settled into a despondency on the part of himself and others who would be restored from senility to youthful vigor.

There are, however, diseases not dependent upon senile decay,

some of them the most malignant, which claim for their victims hundreds, yea thousands, of the human family every year, upon which scientific men are experimenting and expending a great deal of labor endeavoring to invent some means or discover some remedy which will prove effectual in the treatment of these terrible death-dealing maladies and save the lives of those afflicted with them.

The study and investigation of bacteriologists have done much to enlighten the minds of pathologists in their search for the cause and diagnosis of these malignant diseases, as well as those the tendency of which is to recovery; and we think it not unreasonable to believe that the time is near when bacteriologists will be able to isolate and distinguish the peculiar organism—whether streptococus, staphylocopus, micrococus, or baccillus—to the activity of which each and every disease to which the human family is heir owes its respective origin, and not only this, but will discover the means by which such organisms may be destroyed.

Only a few years ago it was even thought that typhoid fever owed its origin and propagation to the implantation of a specific germ. In an article written by Klebs in the Philadelphia Medical Times of December 3, 1881, he claims that he has proven that there exists in typhoid fever a separate and distinct baccillus. Since that time numerous bacteriologists have shown conclusively that in every case of typhoid fever examined by them did they find the typhoid baccillus; and unquestionably the prophylaxis and treatment of this much dreaded malady has been more successful since the adoption of this view.

In the June (1891) number of Gailard's Medical Journal, in an article by I. Burney Yeo, professor of clinical therapeutics in King's College, upon the antiseptic treatment of typhoid fever, he gives a formula, which he claims to be of great worth, and which I myself have used in quite a number of cases. It may be, however, accorded to Murchison, who several years ago discovered that free chlorine in the treatment of typhoid fever, as he says, "is the most useful antiseptic." The plan

adopted by the writer for the preparation of this remedy is as follows: Into a twelve-ounce bottle put 30 grains of powdered chlorate-potassa, and pour on it 40 minims of strong hydrochloric acid. Chlorine gas is at once rapidly liberated. Cork the bottle tightly until it has become filled with a greenish yellow gas. Then pour water into the bottle, little by little, closing the bottle and shaking well at each addition, until the bottle is filled. You will then have a solution of free chlorine, and to this solution add, for an adult, 24 to 36 grains of quinine and an ounce of syrup of orange peel, and give an ounce every three or four hours, according to the severity of the case. I have not usually found it necessary to give it in such large doses, but have had good results from the use of the remedy in tablespoonful doses where I find a persistently high temperature, with a foully-coated tongue, and more especially where there is considerable diarrhœa, with discharges having a very offensive odor.

The writer says that in giving this mixture to a typhoid fever patient, one of the first results you will notice is the remarkable cleaning of the tongue. You will rarely, if ever, find a dry, dirty, thickly coated tongue in a patient who has been early put on this mixture. Another most important change has been noticed again and again and reported to me by the nursing sisters in our hospital; it is that the fetor of the evacuations, which has often been very offensive, will usually disappear within forty-eight hours after the commencement of this treatment. We should expect that this mixture would be wholly absorbed in the stomach and that it would not reach the lower part of the small intestines directly; yet it certainly exerts an antiseptic action on the intestinal contents. But, however this may be brought about, he concludes that experience has convinced him that the following effects may be observed as resulting from this treatment: First, a modification and sustained depression of the febrile temperature; second, an abbreviation of the average course of the fever; third, a remarkable maintenance of the physical strength and intellectual clearness of the patient, so

that there has been far less need of stimulants; fourth, a greater power of assimilating food; fifth, a remarkable cleaning of the tongue; sixth, a deoderization of the evacuations; seventh, a more rapid and complete convalescence. I have, for the last year, treated all my typhoid fever patients, except the very mild ones which rarely need any active medical treatment, on this system, and I have not been disappointed by it in a single case. However, gentlemen, I do not wish to be understood as clamorously praising this mixture to the exclusion of all other antiseptics, seemingly infatuated by a successful experience with it in the limited number of cases in which I have used it, but I do desire you to understand that I believe that the antiseptic treatment of typhoid fever is based upon strictly scientific principles, and when properly and judiciously applied, will result in cure.

TUBERCULOSIS.

Of all the diseases to which the human race is subject, none have so baffled the skill of the medical profession in all ages as this. Only a few men in the profession, up to a few years ago, had been willing to admit even the possibility of contagion in tubercular consumption, and those who believed it to be contagious had perhaps no well defined opinion as to the *principium contagionis* until ten years ago, when Koch, the German bacteriologist, announced to the world the discovery of the baccillus tuberculosis, since which time many "sure cures" for consumption have been brought before the profession, almost every one of which has been relegated to oblivion. The latest method, perhaps, of combatting this direful disease is that proposed and offered to the profession by Shurley & Gibbs. In the Therapeutic Gazette of December 15, 1891, Dr. H. L. Taylor, of Ashville, N. C., gives his experience with twenty-two cases treated in this manner, and also in the Northwestern Lancet, of same date, Dr. C. E. Bean, of St. Paul, gives the results of this treatment in six cases, and, without a seeming disposition to laud the remedy beyond its merits, they both express themselves as

confessing the effectiveness of the remedy. But surely, as I think, the treatment will have to possess very great merit to ever bring it into anything like universal use, on account of the great pain and, to my mind, danger attending the application of it. The treatment consists in the daily hypodermic injection of iodine until the patient is thoroughly iodinized; then is begun by hypodermic injection the solution of chloride of gold and sodium, the treatment to be accompanied throughout by inhalations of chlorine gas. The action of this treatment is not well understood by those who have used it, whether it acts directly upon the bacilli or whether it acts upon and destroys the soil in which these germs develop, has not yet been determined, and maybe before many moons this treatment will follow the ill-fated tuberculin. As long, however, as the tubercule-baccillus can claim, as it now can, to be the cause of one death out of every seven or eight that occurs the wide world over, just so long will men eager to solve the problem which its life history presents devise one means after another to stay its ravages, and hope, yea, may we not confidently believe, the time will be, perhaps not far distant, when pulmonary consumption will be as amenable to treatment as typhoid fever or pneumonia, or any of the less malignant diseases which we are called upon daily to treat.

LA GRIPPE.

This is one of the improvements of modern times, and seems for the last two years to have not respected persons, but has claimed its victim among all classes—old and young, rich and poor, black and white, male and female. Throughout eastern Texas the past winter this disease has been generally of a very severe type; indeed, in some localities the mortality has been great compared with former invasions of the epidemic. The death rate in and around Tyler, I believe, has not been so great, but at other points in this county, and in other counties, I have been credibly informed that the disease has proven very fatal, owing, as is stated, to complications with pneumonia, and it

may be that the comparative freedom of this particular section from pneumonia can account for the small death rate resulting from la grippe, as I have not treated or seen a single case where there existed any pneumonic inflammation whatever. I have seen a few cases of la grippe in which some of the rational or subjective symptoms simulated pneumonia, very nearly, and, indeed, it was often difficult to convince the friends of the patient, or even myself, that pneumonia did not exist, but in every one of these cases the physical signs of pneumonia were notably and persistently absent. Now, I do not wish to be understood as saying that there is no such thing as a complication of la grippe and pneumonia, or that I believe those gentlemen who have treated so many of these cases of so called complication were ignorant and not able to make a correct diagnosis, but I am very much inclined to believe that some of these cases, perhaps, were cases of pneumonia uncomplicated, but masked by a delay of some of the rational and probably some of the physical symptoms, while others may have been cases of the influenza simulating inflammation of the lung substance in some of their more prominent subjective symptoms; for regarding, as I do, the cause or origin of the two diseases entirely separate and distinct from each other, I can not believe that there is more probability of having la grippe complicated with pneumonia than with any other disease, and knowing the great similarity of the rational symptoms in many cases, I conclude that the physical signs may be overlooked and the case denominated pneumonia, when in reality it is la grippe uncomplicated. Some bacteriologists have claimed, I believe, that the pneumococcus is not a distinctive organism peculiar to pneumonia, but that it may be found in other pulmonary and bronchial affections as well. Others as equally eminent in the profession claim that pneumococci are only found in pneumonic subjects. In the Texas Sanitarian of February, 1892, it is stated that in cable reports from Germany, Dr. Pfeiffer has discovered the bacillus of influenza and verified his discovery by inoculation

experiments. They are said to be found both in the sputum and in the blood.

I am inclined to this view of la grippe also from the fact that I think it is evident to everyone who has had much experience with the disease that it manifests itself in two or three different types, or varieties of form. In an article in a reprint from the Medical World upon the origin, history and treatment of la grippe by V. W. Gayne, M. D., of Kansas City, Mo., the writer says, "iufluenza has been rightly divided into three varieties; first, the neurotic form; second, the catarrhal form, and, third, the gastric form." There may be combinations of the above varieties, so that, in my opinion, the disease is due to a definite micro-organism, which is in the atmosphere under certain conditions and at certain places, and when these micro-organisms come in contact with a soil, or a condition of the mucus membrane that is favorable to their lodgment, then the disease is manifested, and I do not believe the same micro-organism will cause la grippe in one individual and pneumonia in another.

I have seen two well-marked complications of la grippe and typhoid fever, each lasting for three or four weeks, and the symptoms of both diseases were present and apparent from the beginning, so that the influenza did not "run into typhoid," as some are inclined to say. One was of the gastric type, the other of the catarrhal or pulmonary type; the former died, the latter recovered. It is my experience, and I think the experience of others, that relapses are of frequent occurrence, particularly if convalescent is exposed to a damp or humid atmosphere. One case which I treated the past winter relapsed the second time; first attack was of the pulmonary form, second of the neurotic form, and third of the gastric form. In the first he had all the rational symptoms of pneumonia—cough, copious expectoration (not bloody), severe pain over lower lobe of left lung, high fever and general indisposition, but not a single physical sign of pneumonia. In the second attack he had high fever, with intense pain in head, back and limbs, and in third attack, which was caused by a thorough wetting in a drenching

rain, he had high fever, with pain over region of stomach and the most intense and persistent nausea.

Now, as to the treatment of this newcomer from across the water there is a diversity of opinion; some advocate a rather antiphlogistic treatment, while others argue that stimulation is necessary throughout. I do not believe that either course alone will fulfill the indications in all cases. Some cases will require supportive treatment from the beginning, while others may bear a more or less depletive treatment. Ordinarily, a mild purge in the beginning, composed of calomel, powdered rhei. and bicarb-soda will best prepare the case for the reception of such treatment as may be afterward indicated. Now, I will say, if the disease is the result of the invasion of a specific bacteria, why not treat these cases antiseptically, as we would typhoid fever, for instance. And may we not conclude that this is the way in which quinine acts beneficially upon la grippe? Quinine is known to be a germicide, and combined with other medicines that will meet the special indications, such as relief of pain, reducing high temperature, etc., why should we not expect good results from its use? When there is great pain, with high temperature, full pulse and a dry skin, full doses of antikamnia or acetanilid will usually relieve the patient in a few minutes, so that you may begin the quinine treatment at once. Where the bronchial catarrh is very marked, with profuse expectoration, stimulants and other supportives along with the quinine will generally give good results. In those cases where the gastric symptoms predominate, and there is much nausea and vomiting, perhaps other germicides will be better borne than the quinine, and I have found nothing to allay the gastric irritability in these cases as readily as creosote.

There are some diseases of which I might speak, as the spotted fever, which has been recently raging as an epidemic in some portions of our State, but as I have fully consumed the time allotted to the reading of this paper, and as abler men than I have recently read papers before this body upon this subject, and as they—two of them at least, Drs. Bell and Burch—were

upon the ground and saw, and perhaps treated, some of these cases, and as their papers were exhaustive treatise upon this, perhaps, not very well understood disease, I shall not attempt to theorize upon the etiology, pathology or treatment of this most formidable malady, but will only suggest what seems to me reasonable and right; that is, that our State government should take cognizance of this trouble to which those communities have been subjected, and try to ferret out the origin and stamp it out of existence, and prevent the recurrence of this distressing disease.

And now this brings me to the conclusion of my paper, and I hope I may be pardoned for saying that I believe the longest stride toward advancement that has been made in our profession is in the greater and still increasing interest manifested in sanitation, or preventive medicine and hygiene.

While we are sending our missionaries to heathen China to evangelize and Christianize them, may we, as physicians, not learn from them a wholesome truth: that to prevent disease is more scientific than to cure. I thank you, gentlemen, for the attention you have given to the reading of this paper.

THE DIAGNOSIS OF MILIARY TUBERCULOSIS.

BY H. A. WEST, M D.,

Professor of Theory and Practice of Medicine and Clinical Medicine, School of Medicine, University of Texas; Secretary State Medical Association, etc.

A very interesting and instructive book might be written with the title "Mistakes in Diagnosis." How frequently such mistakes are made, who can tell? Who will claim to possess that measure of knowledge, experience, acumen and skill as to say he never makes mistakes?

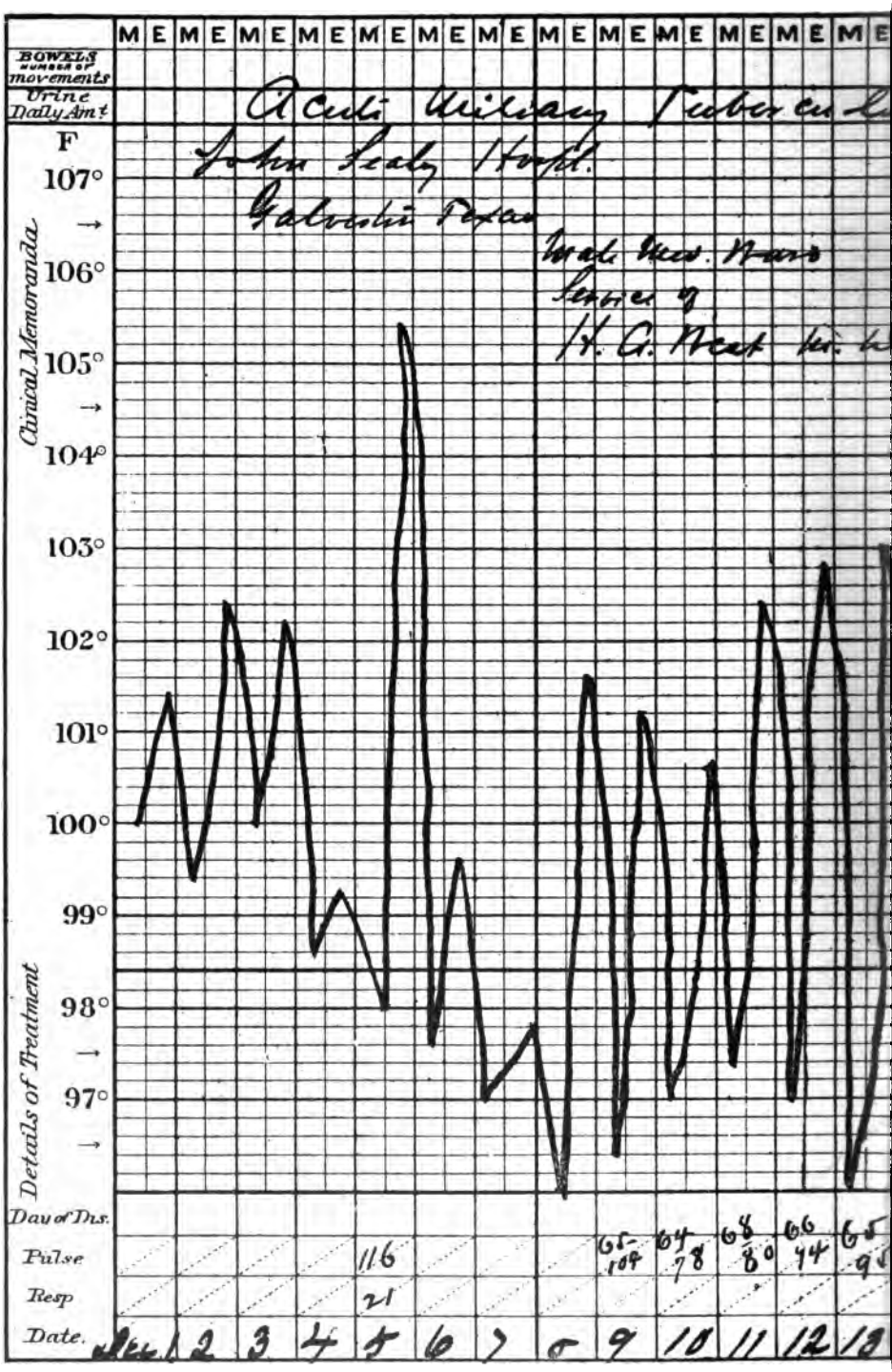
How often are they buried deep in the bosom of our mother earth with the corpse of the hapless victim! How often are they disclosed by the unexpected outcome of an incorrect prognosis. And, alas! how frequently are they exposed by the ruthless hand of the pathologist, as he brings to light with scalpel, saw and microscope secrets never dreamed of in the philosophy of the doctor who treated the case.

Who is there that doubts the fact that our mortuary reports contain so many errors as to be almost valueless? The true causes of death are in very many instances unrecognized and incorrectly reported. If the prejudices of people, especially in private practice, could be overcome and autopsies allowed, many conditions totally unsuspected during life would be discovered post mortem. There is probably no common disease whose recognition is attended with greater difficulties, and none more frequently not diagnosticated than acute miliary tuberculosis. I do not pretend in this paper to add any new facts to those already in our possession upon this subject, but rather to call attention to certain landmarks, especially to those etiological relations showing the identity of the so-called scrofulous processes with tuberculosis, which have only in recent years assumed such paramount importance, and which, if receiving

due consideration, may in many instances afford material assistance in enabling us to arrive at correct conclusions, illustrative of which and preliminary to the subject of the paper, I will briefly give the history of a most interesting case recently under my charge.

Charles Smith, age 27, native of Germany, in Texas four years, in Houston four months, admitted to John Sealy Hospital November 18, 1891. Previous to present illness health had been good—no history of syphilis, gonorrhea or any hereditary trouble. About September 18, after getting wet, was taken with pains in the back, hips and knees; has had irregular fever, with nausea, anorexia and some headache since the beginning of the attack. When admitted the temperature was 102°, pulse 100; chiefly complained of pains in the hip joints, the lumbar region, with marked tenderness in the iliac regions and the anterior muscles of the thigh. Examination of the urine revealed nothing abnormal; careful physical exploration of the lungs gave negative results; at the base of the heart a most peculiar musical systolic murmur was heard. The diagnosis was *rheumatism*, with *rheumatic endocarditis*. Treatment was advised in accordance with this view. The temperature after day of admission became normal, continued so until November 24, when there was an irregular fever lasting two or three days, to be followed by a more febrile condition, lasting until December 1, after which the temperature, as shown by the chart, was characterized by rigors, with morning intermissions and evening exacerbations, the latter ranging from 105½° to 101°, the morning temperature from 96° to 98½°. There was no marked change in the general condition until about December 23, when stupor, gradually increasing to profound coma, supervened. Death ended the scene December 28. Autopsy December 29; body fairly nourished; lungs and pleurae exhibited general miliary tuberculosis; heart showed absolutely nothing to account for the musical murmur which had been heard during life; the spleen and liver also contained an immense number of miliary tubercles; removal of the calvarium disclosed an extensive

tubercular lepto-meningitis, an abundant eruption of miliary tubercles and well marked sero-gelatinous exudation. Here was the explanation of the latter brain symptoms and the revelation of the cause of death, but no explanation of the rheumatic symptoms. The *spine was not examined*, and hereby hangs a tale, and the most interesting fact contained in this history. The subject in due course of time reached the anatomical department in the medical college, and here the *fons et origo* of the tubercular miliary infection was discovered and an explanation furnished of the pains with which the patient had suffered. The following is the condition found by Prof. Keiller, to whom I am indebted for this description, as well as the accompanying drawing: Each psoas muscle was found to be excavated, a cavity occupying the entire intra-abdominal portion of the muscle, but not penetrating the part beneath pouparts ligament. The muscles were reduced to mere sacs, the cavities being lined by a thick fibrous capsule, upon the inner surface of which was a soft pyogenic membrane, each cavity containing about four ounces of thick, yellow pus, with bone debris. The left abscess communicated at the upper limit of the psoas attachment with a cavity in the bodies of the tenth and eleventh dorsal vertebræ by an opening capable of admitting the finger. The communication of the cavity in the right psoas with the site of bone diseases would admit only a small catheter. The vertebræ, on examination, showed that the bodies were reduced by long-continuing caries to mere wedges. The ninth dorsal was softened inside and overlaped the twelfth dorsal at the sides by some periostitic new bone; the bodies of the twelfth dorsal and first lumbar were softened in the interior. The spinal canal was much curved, but widened rather than encroached upon. Here, then, was a tubercular ostitis, resulting in extensive destruction of the bodies of certain vertebræ, perforation into the psoas muscles, the latter converted into mere sacs with retention of contents. If the disease had remained confined to bone and muscle the man might have lived a long time, but, unfortunately, the destructive process invaded some venous trunk, then



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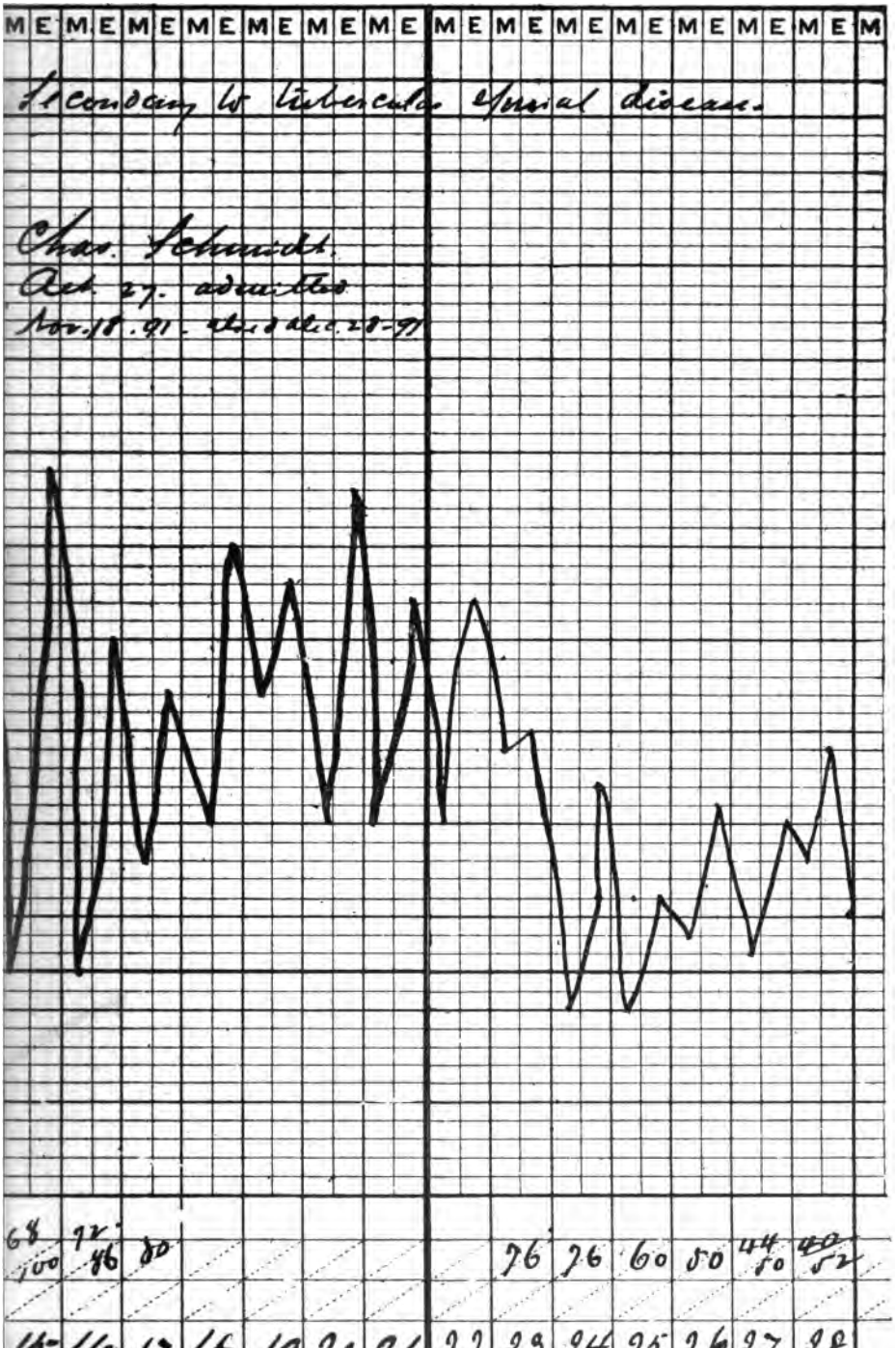
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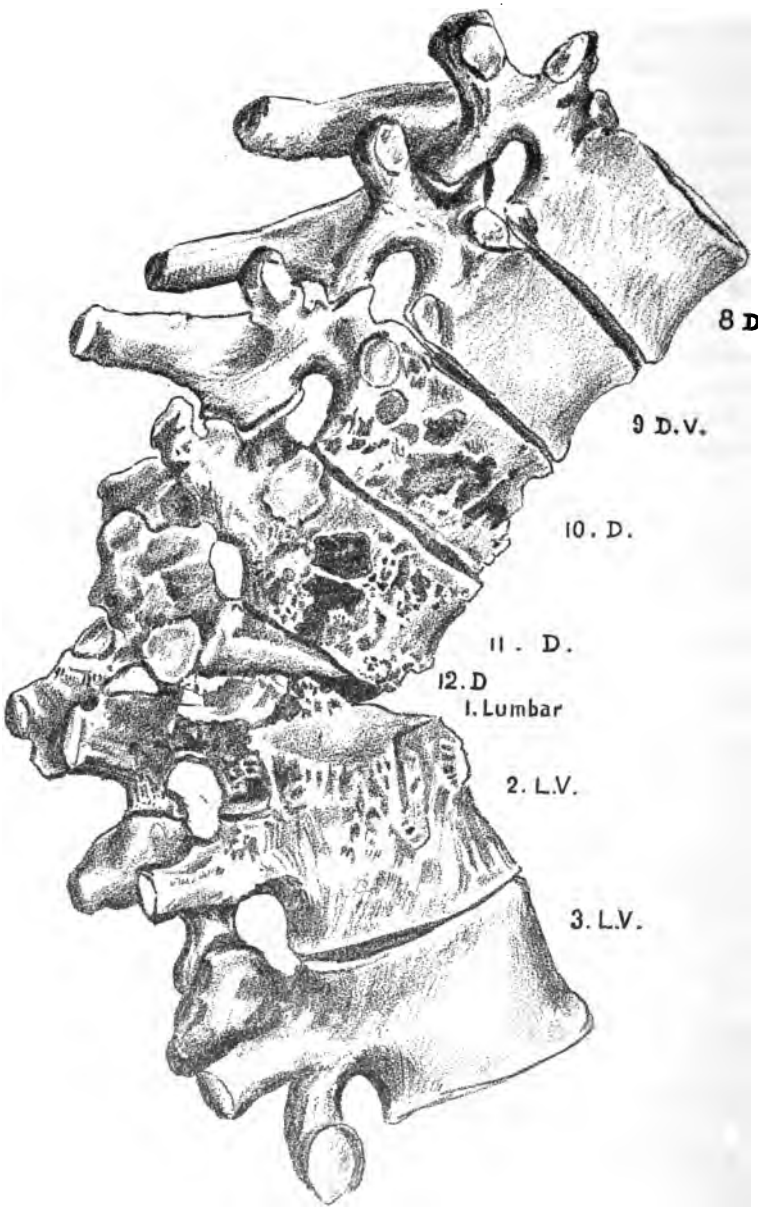
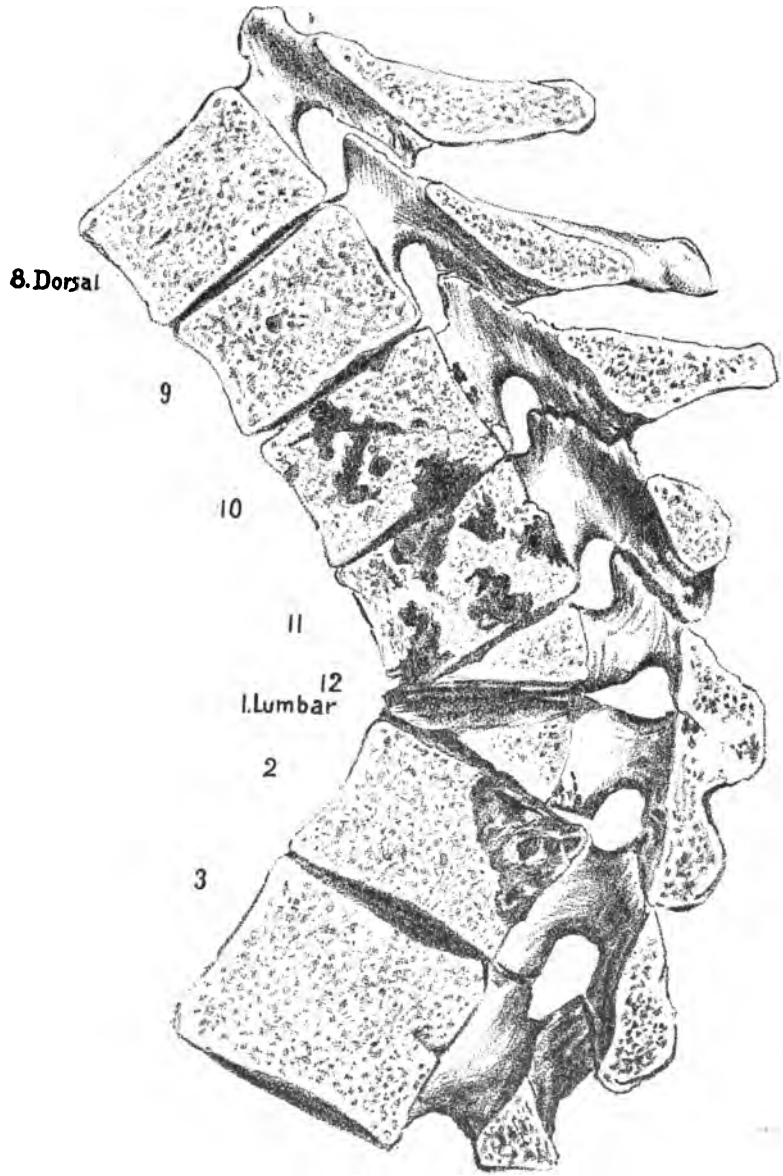
the blood stream was infected by countless numbers of tubercule bacilli, which, finding lodgment in the various organs—lungs, spleen, liver and brain—resulted finally in a tubercular meningitis, and causing the patient's death.

Here is an illustration of an insidious, concealed and chronic specific inflammation, working its destructive way, silently and almost without symptoms, perhaps for months, until finally the invasion of the circulating system results in an acute miliary tubercular infection. What happened in this case occurs in many others. The wise mariner, when he approaches an unknown coast, keeps a sharp lookout for the lights which are to guide him safely into port; so the physician who would not be taken unawares should keep in view the etiology of diseases. He should know that the so called scrofulous lesions are always tubercular; that almost in every enlarged gland tubercle bacilli are found. When he calls to mind the frequency with which children suffer from inflammation of mucous membranes, and, as an oft repeated consequence, hyperplastic enlargement of the lymphatic glands, and then remember that that the tubercule bacillus gets into the gland by the route taken by the ordinary poison, and often at the same time, he should not be surprised at the frequent development of a miliary tuberculosis, or tubercular meningitis. The wonder is, not that these death dealing affections should occur so often, but that so many with enlarged tubercular glands should escape, the only explanation being that the gland acts as a filter, the bacillus is arrested, it is encapulated, and may remain a long time dormant. So, then, the first step in the diagnosis of miliary tuberculosis is the knowledge of the existence in the patient of some chronic tubercular disease of the bones or joints, or that, having had measles, whooping cough, chronic intestinal catarrh or inflammation of some other mucous membrane, he is liable to suffer tubercular inflammation of the bronchial or mesenteric glands, and that these glands, caseating and breaking down, are likely to ulcerate into some vein or lymphatic vessel, and thus a general tuberculariza tion results; or that a latent tubercular focus in

the lungs may suddenly be excited into activity by some acute pulmonary disease, as a catarrhal or croupous pneumonia, and a rapidly developing miliary tuberculosis occurs as a consequence. If careful investigation were made as to the antecedents in every case of tubercular meningitis, or general miliary tuberculosis, some such condition as above mentioned would undoubtedly be found in a very large proportion of cases. There are some cases, it is true, where the primary source of tubercular infection can not be discovered, but knowing, as we do, the invariable secondary nature of miliary tuberculosis, we must assume that the cause exists but is not found. For purposes of study we may divide miliary tuberculosis into three typical forms, bearing in mind that there is no sharp line of distinction between these types and that they often merge into each other: First, there is the typhoid form, with symptoms indicative of general infection predominating; second, the fulminant form, with symptoms of cerebral and spinal meningitis predominant; third, the pulmonary form, in which symptoms indicative of lung infection occupy the foreground in the clinical picture. I can best illustrate the symptoms, and their obscurities oftimes, by citing some cases from my note book.

First, of the typhoid form. About November 15, 1891, I was called to attend the male child of A. B. F., aged three years. The child was delicately formed, but there had been no previous illness, no enlarged tonsils or external glands, no disease of bones or joints, no tubercular or strumous diathesis in his parents; but his mother, at the time the child was taken sick, was convalescent from an attack of enteric fever. This fact, as tending to obscure the diagnosis, will be commented upon later. At the beginning the only symptoms indicative of illness was the slight pyrexia, the anorexia and coated tongue, which might be accounted for by the fever. The temperature was remarkably uniform, ranging from 99½° in the morning to 101° and 102° in the evening. The bowels were constipated from the beginning. There was no cough. Physical examination of the lungs gave negative results; no albuminuria. The fever con-


8 D.V.
9 D.V.
10. D.
11. D.
12. D
1. Lumbar
2. L.V.
3. L.V.


8. Dorsal
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tinued with very little variation until about the end of the third week, when the stomach became irritable, he began to vomit, constipation became more obstinate, he began to become drowsy, which gradually increased, the pupils became sluggish and contracted, then convulsions supervened, stupor deepened into coma, which, after a while, became profound; he lingered in this comatose state four or five days, death ending the scene about January 12, after about eight weeks' illness. What more natural conclusion at the beginning than that this was a case of mild enteric fever? Here was the mother actually sick with that disease in the same bed; there was the probable cause in the filthy condition of an alley just under the window; but the obstinate constipation, the vomiting, drowsiness, stupor, coma, repeated epileptiform convulsions, proved that the early fever was symptomatic of a tubercular infection, and that the later nervous phenomena resulted from its localization in the pia mater of the brain, the consequent inflammation, and pressure from exudations upon the cerebral centers. It is useless to multiply such examples as this; they are, unfortunately, too numerous.

Of the fulminant forms I shall not cite any particular case, but will mention the prominent characteristics of several which have come under my observation. A child which may have been apparently healthy and vigorous is suddenly taken with a convulsion, succeeded, or, perhaps, preceded by a few days, by high and irregular fever; very soon there is a rapid development of pronounced and severe nervous symptoms; the convulsions recur with greater or less frequency, and can not be ascribed to any reflex disturbance; headache often severe, tendency to stupor, deepening into coma, rigidity of the back and neck, disturbance of innervation of the ocular muscles, strabismus and the like, disposition to frequent vomiting, constipation of the bowels. After a while the paralytic stage comes on—deep coma, relaxed muscles, rapid pulse, marked variations of temperature, finally death.

Cases presenting predominant pulmonary symptoms may de-

velop suddenly, like an acute pneumonia, or may come on gradually with a tedious premonitory stage. From the beginning the symptoms point especially to the lungs, or pleura; there is pain in the side, more or less cough and expectoration, dyspnœa, fever and general prostration. Later the dyspnœa increases, as do the other pulmonary symptoms, the face becomes pale and cyanotic. Physical examination most often gives negative results. The disseminated miliary granules produce no dullness. There may be evidence of a diffuse bronchitis, but this is not significant; in fact, the contrast between the severe subjective symptoms, especially the dyspnœa, the cyanosis and the rapid breathing, with insignificant physical signs, is highly diagnostic of pulmonary miliary tuberculosis.

It will, perhaps, be observed that I have made no discrimination between tubercular meningitis and a general miliary tubercular infection. This I have purposely done, for the reasons that, though clinically the two affections may be differented, yet etiologically and pathologically they are identical; that is to say, that though the cerebro-meningeal localization may overshadow the symptoms of general infection by the severity and rapidly fatal nature of its lesions, yet we know that the pia mater of the brain and cord are affected only as a part of a general process. Why, then, should there be any special vulnerability upon the part of the nervous centers toward tuberculariization? We know not; but we do know that infection with miliary granules may in some organs produce no symptoms, as e. g., the heart, liver, kidneys and choroid; hence we explain the frequent predominance of the meningeal symptoms by the anatomical relations of the part affected. The brain, inclosed in its bony case, is especially liable to suffer from the effects of pressure. Exudations, which in other situations might produce few if any results, in the central nervous system, may prove speedily fatal, after having produced a very wide and diversified train of symptoms. There are some cases of miliary tuberculosis, of either the pulmonary or cerebral form, which come on more insidiously and pursue in the early stages a more

chronic course than that I have mentioned. There may be evidence of failing health several weeks, or even months antecedent to the development of well-marked cerebral or lung mischief. The best sketch of these premonitory symptoms which has ever been given, and the one which has afforded material for all subsequent writers, is that contained in the work of Rilliet & Barthez, from which I quote: "These symptoms may be due to several different causes. First, to a scanty early formation of tubercles in the lungs, which are not evident upon physical examination; second, to the slow progress of a tuberculous mesenteric or bronchial gland, or to a slowly progressing scrofulous or tubercular process going on in the bones or joints. Foremost in the list of these symptoms is progressive *emaciation;* the limbs waste and lose their plumpnees, the ribs and bony processes project beneath the skin, the muscles feel soft, the skin is lax and flabby. The face may retain its soundness of outline, so the loss of flesh is first observed by the nurse who dresses or undresses the child. The eyes are dull, expression unanimated; the appetite capricious or diminished; the bowels disordered, usually constipated, or, with intervals of diarrhœa, the evacuations are apt to be pale and offensive. The child is dull and apathetic, its disposition altered, is slow in its movements, is easily fatigued and is apt to be fretful and peevish. Headache is sometimes present, but more frequently it complains of being sleepy and tired, and wanting to lie down. At night it is restless, lying with its eyes half open, arousing at the slightest noise, and unable to sleep with a light in the room; or it may grind its teeth or cry out with alarm at its dreams." Whether fever is present during the development of these prodromata is doubtful; a slight evening rise would probably be noticed with careful use of the thermometer. After an uncertain duration of several weeks, repeated vomiting, severe headache, strabismus, epileptiform convulsions, drowsiness and an increase of fever are the symptoms which usher in a well-marked cerebral meningitis. I have already indicated that enteric fever is the disease most liable to be confounded

with miliary tuberculosis. There are some cases where it may be almost impossible to make the discrimination, especially during the preliminary fever, before there is evidence of tubercular localization in the brain or lungs. It is here that a study of the etiological relations as before mentioned becomes of great importance. The discovery of some old tubercular process may clear up our doubts before the symptoms make the diagnosis manifest. Referring now to some of the points in differentiating the two diseases, let me mention the most salient. First, the course of the fever. While in some cases the temperature curve may show the morning remissions and evening exacerbations very much resembling typhoid fever, as in the case of the child of A. B. F., narrated above, yet oftentimes there is a distinct departure from this regularity; the temperature may show sudden rises and falls, with, perhaps, in the earlier stages, several days complete intermission. Altogether the course of the fever is more erratic in the tubercular affection. The pulse also may be irregular and abnormally slow.

Epistaxis, hemorrhage from the bowels, enlarged spleen, rose eruption, abdominal tenderness, tympanitis and diarrhœa are symptoms often present in enteric fever, not likely to be seen in miliary tuberculosis. One symptom of great diagnostic value is the discovery of miliary tuberculosis of the choroid; hence the importance in every doubtful case of submitting the choroid to careful opthalmoscopic examination. The presence in the blood of the tubercle bacillus will also settle the diagnosis in favor of miliary tuberculosis, but it can easily be understood that the microscope may give negative results in many cases of miliary tubercular infection, simply because the difficulty of detecting their presence, though existing in numbers in the volume of blood, the drop under the slide may not contain any.

While the subject of this paper concerns the diagnosis of miliary tuberculosis only, I can not refrain, in concluding, to say one word upon the prophylactic treatment, and really, that is the only treatment by which any good can be accomplished. In this connection I can do no better than quote the emphatic lan-

guage of Prof. N. Senn: "*Early operative interference* is as necessary in the *treatment* of *tubercular adenitis as in the treatment of malignant tumors*, and *hold out more encouragement* as *far* as a *permanent cure is concerned.* By a thorough removal of the primary foci of infection, successive infection of puxmial glands and general miliary tuberculosis are prevented almost to a certainty if the operation is performed before the disease has extended beyond the capsule of the glands." It is hardly necessary to say that the same rule applies to removal by surgical means, when practicable, of a tubercular focus existing in bones or joints, or any other situation which can be reached by the knife or curette. It is the crowning glory of modern pathology that it has pointed the way to the surgeon of preventing results of such incurable conditions as a general tubercular infection. It is the crowning glory of modern surgeons that they have fearlessly followed in this pathway, and thereby saved many human lives.

DISCUSSION.

By Dr. JAMES KENNEDY: Supplementary to the very able paper of Dr. West, I desire to make a few remarks upon a case of tuberculous osteitis which recently came under my observation. It was a case of tuberculosis of the tibia, and the bone was found to be so extensively destroyed by the process that amputation of the limb was necessary. The patient was a boy thirteen years of age, who, at the time I was called, had been confined to his bed for three weeks, and during this time was treated for erysipelas by the physician in attendance, who painted the limb daily with tincture of iodine and tincture of iron.

When I first saw the little fellow the limb was very much swollen from his knee down to his toes. The skin was tense and shiny. There was great pain and considerable constitutional disturbance. Fluctuation was detected with great facility, and on free incision about two pints of pus escaped. The bone was found to be so extensively diseased as to necessitate amputation of the limb. The bone was found to be destroyed through its entire circumference at the junction of epiphysis with the diaphysis, and for a considerable distance below this point it presented a honeycombed appearance. The lesion involved three-fourths of the length of the bone and its entire circumference for its upper fourth, but below only

about one-third of its circumference was included. The epiphysis being entirely separated from the shaft, it was maintained in position by the tibia-fibular (superior) articulation and the ligaments of the knee joint. It is remarkable that while the articular surface of the tibia was badly diseased, the fibro-cartilages and ligamentous structures appeared to be perfectly healthy.

I would emphasize the value of an early diagnosis of a tubercular lesion and the removal of tubercular glands, as well as other tuberculous-infected tissue, as soon as diagnosticated. I am satisfied that my patient suffered from a tubercular affection of the tibia as early as a year ago, judging from the history which I elicited, and if surgical interference had been resorted to at that time the limb might have been saved.

I will add that he made a rapid and satisfactory recovery from the operation, and that the amputation was through the lower third of the thigh, because of the condition of the soft parts.

A CASE OF PERITYPHLITIS.

BY J. P. TUCKER, M. D.

OVERTON, TEXAS.

I was called April 17, 1891, to see Mr. L. D. Jemigan's little son, aged fourteen years. I examined the little patient and found considerable tenderness in right iliac fossa. Patient complained of excruciating pain all the time. Temperature, 102°; pulse, 130; respiration, 38. I gave five grains of calomel, one-half grain of pulverized opium and five grains of antifebrine to reduce temperature; then three grains sulphate quinia every four hours; one-eighth of a grain sulphate morphia, as required, to reduce pain; turpentine stupes over bowels. But my little patient continued to suffer pain. On the morning of April 26 I discovered an abscess about two inches below and one and one-half inches to right of umbilicus. I explored the abscess and found pus deep seated. I made a free incision through the abdominal wall into the sac. At the time I operated I think it discharged twenty ounces of thin, milky looking pus, odor of fecal matter. The father of the little patient says he is satisfied it discharged one gallon of pus in all. It discharged four weeks. I put in a drainage tube. After the operation the treatment was iron, quinine and rich food, in form of fluids; morphine, as required, to relieve pain; bowels kept in a soluble condition. The little patient says about three weeks before the abscess developed he jumped off of a stump, and the end of a hoe handle struck him in the side where the abscess formed. About four weeks after it ceased to discharge the little unfortunate patient went out horseback riding with his brother, and they ran a horse race. The horse stopped suddenly and threw him on the horn of the saddle, and another abscess developed in the same place. It opened spontaneously this time, and discharged two weeks.

Etiology-Perityphlitis is usually the result of extension of inflammation from the vermiform appendix, or its rupture from ulceration. It may be due to the extension of tubercular, typhoid or dysenteric ulcers in the cæcum, and to the lodgment of foreign bodies in the vermiform appendix. Caries of the spine or of the pelvis has induced it. Transmatism is an occasional cause. It is rarely of spontaneous origin.

Symptoms—In a few instances of perityphlitis, especially those supervening on typhlitis; there will be a history of colicky pains, which radiate outward from the cæcal region, with more or less irregularity in the action of the bowels; there is pain in the thigh, accompanied by numbness, and a sense of formication in the right lower extremity, due to pressure of the tumor upon the nerves. This pain is deep seated and much increased by flexing the thigh upon the abdomen. Rigors and febrile movement are usually slight. In extensive perityphlitis the patient can not raise the right thigh, either on account of the pain or from interference with functions of the nerves from the pressure. When the abscess is of larger size there may be œdema of the limb; the parts in the vicinity of the cæcum are very tender to pressure, and the patient usually lies on the right side, with his thigh semiflexed, so as to relax psoas and iliac muscles. As the abscess increases in size there is, in adults, constipation and a tendency to vomit; in children, the bowels are commonly loose and pains in the stomach will have been an early and prominent symptom. When a perityphlitis arises as a typhlitis is disappearing, a painful tumor, more deeply seated than in typhlitis, will make its appearance.

This little patient finally made a good recovery.

DISCUSSION ON APPENDICITIS.

By Dr. JAMES KENNEDY, San Antonio: Within the past twelve months I have seen three operations for appendicitis, two of which were performed by myself and one by Dr. Russell Caffery. In the first of the series the patient, a woman of about twenty years, gave a history of a previous attack, from which she recovered. I saw her in the second attack after an

abscess had formed. Operation was advised, but refused by the relatives, although insisted on by the patient, who, after two days of insisting, prevailed, and the operation was performed. It was found on entering the peritoneal cavity that there was an extensive peritonitis, and adhesions, both old and recent, were numerous. About two pints of pus were evacuated from the abscess, whose walls were so thin and fragile that rupture occurred with the slightest touch. A plastic exudate of a half inch or more in thickness covered the peritoneal surface of a large portion of the intestines, especially the colon. The appendix sloughed through its middle portion. When the pus was evacuated a scybalus was found, in shape like a bean. This was in all probability the cause of the attack. Death resulted in twelve hours from peritonitis.

In case number two the patient was a boy of about thirteen years, who gave a history of having swallowed a shot three days previously and of having eaten heartily of green peaches. The vomiting and pain in the hypogastrium were thought at first to be due to the green peaches, and but little attention was given to the shot he had swallowed until a well-marked case of appendicitis developed. Operation was advised as soon as fluctuation could be detected, but the consent of the parents to operate could not be obtained until forty-eight hours later. At this time there was great weakness and prostration The operation was performed. A few ounces of pus were evacuated, together with a musk-melon seed. The shot passed with the fæces the day before the operation. There was a diffuse or general peritonitis, the same as in the other case. The appendix was more than six inches in length, and was bound throughout its entire length to the gut by very firm adhesions, which were doubtless the result of an old attack, as the boy gave a history of having fallen from a tree some months before and suffered from pain in this region, from which he recovered in a couple of weeks. Recent adhesions were numerous, and the same plastic exudate covered the gut that was found in the other case. Death resulted from peritonitis in eighteen hours.

Case number three was a patient of Dr. Russell Caffery. I was called by the doctor in consultation and learned that he had been called very late in the case, and the patient's condition had been practically hopeless, as perforation with the peritoneal cavity had already occurred. The patient's temperature was 96 degrees Fahrenheit, and it was very evident that he was suffering from the shock occasioned by perforation. We warned both the patient and his friends of the gravity of the situation, of the certainty of death without an operation, and how small was the chance of recovery with an operation under the existing circumstances. Operation having been decided upon, the doctor opened the peritoneal cavity and evacuated about three pints of serous pus. The stump of the appendix was tied off and removed, the cavity flushed and the wound closed,

with provisions for drainage; but before we could get the patient off the table he was dead.

The moral to be deduced from these cases of ours, and similar cases in other hands with like results, is this: *Operate early in cases of appendicitis where the diagnosis is clear.* If we wait until general peritonitis sets in, either from extension of the process or perforation of the sac, we are guilty of an act that borders upon criminal negligence, if not of this offense itself, provided the consent of the patient and friends could be obtained. I regard it as our duty to advise every patient suffering from this disease of the possible termination, and be on the alert to advise operation at the right time.

LA GRIPPE—SUGGESTIVE LETTERS FROM EMINENT MEN.

BY J. D. BURCH, A. M., M D.

AURORA, TEXAS.

This association has coughed and sneezed, hawked and wheezed, through three consecutive epidemics of la grippe, and the writer has not the slightest idea of asking the members to labor up from a probable epidemic 415 B. C. to this good year 1892, through the chronology of influenza, la grippe, blitz katarrh.

The Italian name, "Influenza," was most familiar to my boyhood days. The Italians believed the disease due to the "influence" of the stars—hence the name "influenza."

If, after our experience of the past winter, our scholarly brethren of Germany would again take up *their* name for this epidemic catarrhal fever, "blitz katarrh," and recoin it into "donnern und blitzen" (thunder and lightning), I think it would be declared legal tender nomenclature in Texas.

Hurrying through the centuries, from an attack on the Athenian army in Sicily more than four hundred years before Christ, we come more definitely to the epidemics of 1173, 1239 and 1299. Then we will glance at Gluge's chronological table, beginning in the fourteenth century, and by interjecting dates from the highest authorities, make, I believe the most perfect table so given. As Dickens' word painting of love, we behold it "an old, old story."

Fourteenth century—1323 and 1326. Fifteenth—1410, 1411 and 1414. Sixteenth—1510, 1557, 1562, 1574, 1580 and 1593. Seventeenth—1658, 1669, 1675 and 1693. Eighteenth—1708, 1712, 1729, 1732, 1733, 1742, 1743, 1761, 1762 and 1775. Nineteenth—1800, 1803, 1831 and 1833. Aitken would add 1311

and 1403. Wilson has gotten from different authorities 1558, 1591, 1610, 1626, 1627, 1642, 1643, 1647, 1655, 1688, 1709, 1730, 1737, 1738, 1757, 1758, 1767, 1772 and 1788. Watson mentions 1782; Dr. Rush, 1790; Webster, 1795, 1797, 1798 to 1803. Many epidemics in Europe and America from 1788 to 1890. Condie gives 1787 and 1805 to 1827; Currie, 1807; Condie, 1816, 1826, 1830, 1832 and 1837. Many from 1837 to 1850–51; 1843, 1847, 1848, 1857, 1858, 1860, 1864, 1867, 1874 and 1879. Among the chief epidemics may be mentioned 1762, 1782, 1787, 1803, 1833, 1837, 1847 and 1889. Texas will remember 1889, 1890, 1891 and 1892.

The epizootics of 1872 and 1880 will be remembered by all lovers of the horse—the doctor's faithful friend. Those were epidemics of influenza, as shown by the morbid anatomy. I had a favorite saddle horse standing in a livery stable where there were a few less than forty horses. Thirty of these began to cough the same night or early morning. By evening of that day all were coughing.

This reminds me of the loss of two fine cows in Kentucky from what I there called "Texas fever." Here I would call it "Spanish fever." So in Italy they spoke of la grippe as the "German disease." In Germany they called it the "Russian pest." In Russia they would not foster the child, but said it was "Chinese catarrh." In America we can safely say it is a "foreign devil," and petition against its naturalization.

Our chronological table is valuable in several respects. It certainly upsets the old idea that the epidemics were cyclical.

Hand in hand walk an epidemic and pandemic catarrh. With a promise not to be prolix, and with obvious design, I give a few lines from Wilson: "In the year 1830 began a series of epidemics remarkable for their wide diffusion and the rapid succession with which they followed one upon another. The disease began in China; in September it reached the Indian archipelago; it swept into Russia and invaded Moscow in November; in January, 1831, it was raging in St. Petersburg; March found it in Warsaw, April in eastern Russia and Silesia;

in May it prevailed in Denmark, Finland and a great part of Germany, and in the same month it fell upon Paris; in June it was in England and Sweden; it was still sweeping about middle Europe and lingering about Great Britain at the end of July; in the early winter it swept southward into Italy and westward across the Atlantic to North America, and was still harrassing the inhabitants of certain regions of the United States in January and February, 1832. Meanwhile it continued in the east, spreading to Java, farther India and the Indian archipelago. It continued in Hindostan after it had died out in Europe. But in January, 1833, it again visited Russia, and rolled thence southward and eastward over most of Europe. It is recorded that by February it had reached Gallicia and eastern Prussia; in March it was in Prussia, Bohemia and Warsaw, and had extended it to Syria and Egypt; in April to many parts of Germany and Austria, and to France and Great Britain. Midsummer found the disease yet prevailing in some districts of Germany and north Italy, and in the early autumn it was in Switzerland and eastern France; in November it visited Naples. Epidemics so frequent, so widespread and so unsparing of individuals wherever the disease appeared, could not fail to excite a deep and general interest."

In the same paper I recently saw recorded the deaths of the eldest son of the Prince of Wales, two cardinals in the church of Rome, and innumerable peons, like myself, in the great work of life. Sir Morell MacKenzie, one of our distinguished specialists in throat and lung diseases, fell a sacrifice to la grippe; Dr. De Hays Agnew more recently. Truly, it is no respecter of persons, nor is it baffled by surroundings. Epidemics have flown on the wings of the swift over Europe in six weeks, or have gone creeping on the feet of the sloth in six months.

Writing of 1833, Watson says: "On the 3d of April of that year—the very day on which I saw the first two cases that I did see of influenza, all London being smitten with it on that and the following day—on that same day the Stag was coming up the channel, and arrived at 2 o'clock off Berryhead, on the

Devonshire coast, all on board being well at that time. In half an hour afterward, the breeze being easterly and blowing off the land, forty men were down with the influenza, by 6 o'clock the number was increased to sixty, and by 2 o'clock the next day to one hundred and sixty."

Condie, writing in 1858, says: "In its several visitations in this country it has usually commenced in one of the Eastern States and extended southward along the seaboard with more or less rapidity. In 1807, however, it showed itself first in New York, spreading thence, as from a center, in every direction. It reached Canada on the north and the Southern and Western States in the course of three months. The amazing rapidity with which it diffused itself over the American continent resembled more the fleetness of the wind than the natural course of a disease." Plainly, this also shows that there is something in the atmosphere that is the exciting cause. Yet it is to a limited degree portable and contagious. Much proof could be offered, but it is unnecessary. Watson calls attention to numerous instances "in which the complaint has first broken out in those particular houses of a town at which travelers have recently arrived from infected places." Wilson quotes Drs. Guiteras and White: "An American gentleman in bad health contracted the disease in London, improved, suffered a relapse shortly afterward in Paris and died there at the end of December, 1879. His body was embalmed and sent home. Following the exposure of the remains of this person to the view of his family in Philadelphia there was an outbreak of influenza, with characteristic symptoms, which affected, in the first place, members of that family; afterward, friends living in close intercourse with them; next, the medical attendant of some of them, and, finally, the housekeeper and a patient or two of one of the physicians who wrote the paper, the whole number affected in Philadelphia being eighteen at the time of the publication of the account. Subsequently two or three other cases were developed, but the disease did not extend beyond the immediate circle of those in direct communication with the invalid."

Noah Webster is authority for the statement that the epidemic of 1647 was the first mentioned in American medical history. In 1732–33 Saxony and Poland had an epidemic; thence to Germany, Switzerland and over Great Britain, to France, Italy and Spain, to North America. We had la grippe in 1737, 1738, 1757, 1758, 1761, 1767, 1772 and 1781. Many epidemics in America during 1788 and 1790. Webster says: "The influenza of October and November, 1789, and that of April and May, 1790, were very general or universal in the United States, and unusually severe. A like influenza prevailed in the winters of 1825 and 1826." We suffered, indeed, from 1805 to 1827, 1831 and 1832; from 1857 to 1864. Da Costa gave a valuable account of the epidemic of 1879.

The great epidemic of 1847–48, described by Peacock as seen in London, surpasses all others.

There are exceptions to the rule, but epidemics usually prevail two months or less time in a certain locality. It is no respecter of persons, regions or countries. It has attacked the antipodes simultaneously; it has marched against the prevailing winds. Nor does the temperature of the atmosphere arrest it, as frost does yellow fever. It basks in the sunshine and hurries through the frost. Truly, a cosmopolitan king. Able writers believed la grippe depended on telluric influences. O'Neale, Henle and Holland, some thirty-five years ago, advocated strongly the animalcular theory as a cause. So late as 1858 Mr., afterward Sir Thomas Watson, probably the greatest writer of his day on the theory and practice of medicine, said to his London classes: "Another hypothesis, more fanciful, perhaps, at first sight than these (telluric, atmospheric, temperature or meteorological, magnetic and ozone theories), yet quite as easily accommodated to the known phenomena of the distemper, attributes it to the presence of innumerable minute substances endowed with vegetable or with animal life and developed in immense abundance under specific states of the atmosphere in which they float and by which they are carried hither and thither. Myriads of these animulcula, or of these

vegetable germs, coming in contact with the mucous membranes, and especially with that of the air passages, irritate (it is imagined) those surfaces and exercise a poisonous influence upon the system. Again, that the waters of this globe swarm with living creatures, which, invisible by our unaided eyes, the microscope has taught us. Others, too numerous to be estimated even by that wonder-showing instrument, in all probability exist. We can not doubt that the gaseous fluid which surrounds this planet equally teems with living atoms. We know that multitudes of insects and of cryptogamous plants, infinite in number with respect to our finite powers of computation, *are* sometimes suddenly hatched or developed in places which were previously free from them. It is easy to conceive that atmospheric infusoria (so to speak) may rapidly congregate, or vivify, in masses sufficient to render deleterious the air we breathe." How near the accepted theory of today! Yet, how far from it when he adds: "That which most commends itself to my own acceptance, and which may also be most easily put to the test when the opportunity shall arise, is the ozone hypothesis." He refers to M. Schonbein's theory in a paper on ozone—1851. How fortunate that Pasteur and his followers have not accepted theories "which may also be most easily put to the test when opportunity shall arise." Having diligently sought opportunities, they have put all theories to a crucial test. Graves wrote: "The empire of Reason, extending from the old to the new world, from Europe to the antipodes, has encircled the earth, and she never sets on her dominions; individuals must rest, but the collective intelligence of the species never sleeps." Ancient dream of a grand man! Today behold Virchow's development of cellular pathology; Pasteur demonstrating that fermentation is "life without air," and demolishing the bastions of the devil—the doctrines of spontaneous generation; foretelling the results of bacterial processes in certain diseases; Devaine proving that a single spore may innoculate an animal; Lowenhœck giving the population of a drop of water at 500,000,000; Cohn telling us that a bacterium in two days

"will have multiplied to the incredible number of 281,500,000,000;" Koch, supported by Klebs and others, saying "bacteria do not occur in the blood, or in the tissues of a healthy living body, either of man or the lower animals." What a glorious victory for science! Let not this victory be turned to worse than defeat by much of the false doctrine of evolution. I prefer to believe of Bechamp's isolated microbes from the chalk of the second epoch that "like produces like;" that bacteria or germs attacking or infecting the Athenian army four hundred years before Christ are the same "yesterday, today and forever." If these bacteria caused influenza two thousand years ago, the same bacteria do it now. I believe in no other change for them save that which may be caused by change in the medium in which they exist, and that their ancient type is restored always by the restoration of the surroundings of the original type coming from the creator of all things, "both great and small." Dr. Max Jolles and Prof. Weichselbaum, with others, have, more than two years since, discovered in the sputa of cases of influenza a new micrococus, resembling Freidlander's bacillus or the pneumococus of Fraenkel and Weichselbaum. This micro-organism is extremely small, "an absolute minimum of the infinitely little." But it can be viewed today by microscopes of three thousand or four thousand diameters, that, as Griffiths says: "If we could view a man under snch a lens he would appear from three to four miles in length." Atremba believes the microbe identical with that of simple coryza, and prefers the name "epidemic catarrhal fever." Flint calls the disease under consideration "epidemic bronchitis." I reserve some grippo-toxine problems for the close of this paper.

Briefly, the symptoms of la grippe are: Chills or rigors, soon followed by a tightness or severe headache or marked frontal pain; sensitive or watering eyes; sneezing often ushering in the attack; discharge from the nostrils; hoarseness, cough and, may be, difficult respiration; frequently severe pains in the limbs and different parts of the body; great muscular debility in influenza, great articular pain in dengue. Symptoms are

varied as we meet the catarrhal, gastro-intestinal or nervous forms of la grippe. Temperature more or less elevated, generally, and, in many cases, notably disturbed circulation; pulse often quick and feeble; excessive expectoration and sweating is often seen, not caused by treatment; frequently great disturbance of the digestive system, loss of appetite or loathing of food; sweet water from the "old oaken bucket" disgusting or vomited; great depression of spirits and loss of strength. No symptoms more characteristic and none more interesting to me. All powerful, all pervading spore, bacteria or grippo-toxine; you cause a patient to immortalize himself by crying out: "The first day or two I was afraid I would die; the next day or so I was afraid I wouldn't; the balance of the time I didn't care whether I died or not." In a few days, if no serious complication, gastric, pulmonary or nervous, the patient is convalescent. Great debility, so generally noted, continues with the aged or enfeebled from other cause or disease. As Dr. Rush expresses it, other diseases "put on its livery." The sudden and overwhelming invasion is only equalled by the often sudden and complete disappearance of the expidemic. The prognosis of uncomplicated cases is favorable. In bright, pleasant weather hundreds demand or require no treatment. They "tough it out" or "weather it out," as they term it. Remembering the often extreme debility and interrupted heart's action, together with the emphasis that Flint places on Dr. Gardner's observations (that have been our own), "during the prevalence of influenza other diseases are unusually severe, and the rate of mortality from all diseases is increased," we should treat la grippe with great conservatism, yet promptly, and with an eye to the most frequent complications, to avoid or prevent these if possible. In the vigorous or otherwise healthful, with strong circulation and no dyspnœa, I have not hesitated to give phenacetin and salol combined, feeling that I am giving an antipyretic, analgesic and antiseptic at once. I have used phenacetin to the exclusion of antipyrine, antifebrine, etc., since I could first get it. When first introduced here a "corner" was

made on it for a short time by a retail drug house of the State in order to secure prescription business. I always watch phenacetin, and never place it in the patient's hands to abuse. Few and small doses, with careful instructions. If feeble, or greatly disturbed circulation, with much pain, morphine and atropine, hypodermically; or, by the stomach, morphine and an alkali—sodium bicarbonate or sodium hyposulphate. For prominent head symptoms, pain and flushed countenance, if the stomach is tolerant, one of the bromides, with or without an opiate, and hot pediluvia. If I wish to avoid phenacetin, having a high and obdurate fever, I have seen beautiful results from full doses of quinine and small doses of salol combined. If the patient is feeble and small, poor, frequent circulation, I give digitalis, strychnia, arsenious preparations, ammonia and stimulants, with careful attention to diet. Nourishing but easily assimilated food at regular intervals. Much food at once, or rich food, frequently increases headache and adds to the fever, which is of a remittent type, with an evening exacerbation. Salicylate of sodium has enjoyed popularity in the gastro-intestinal form of la grippe; the joint idea being fairly carried out in that of salol. Salol has so much carbolic acid in it that its effect on the kidneys must be noticed. Mild aperients are sometimes required in the gastro-intestinal form of la grippe, with one of the best pepsins after food. With care toward intestinal antiseptis, we may use salicylate of bismuth, iodoform or zymocide. For throat or nose irritation, a cocaine gargle or wash. Prof. Laffont's recommendation of preparations of coca, to overcome astheina and shorten the attack, is meeting with favor. For the cough, an opiate with chloroform, or the adodyne of morphine and bicarbonate of soda, does well. Pneumonic forms of influenza require supportive treatment *ab initio*. It is not amiss in the south or southwest in any form of pneumonia. Prof. Keene has suggested an excellent food and stimulant if the patient requires both at once, and can not take chicken jelly, milk-oyster soup or other such nourishment, or such stimulants as mellow whisky, soft brandy, egg-nogg, milk punch. He directs the

whites of two eggs, shaken in a pint bottle of lime water; shake vigorously; add half a pint of pure milk and shake thoroughly; then add sugar, nutmeg and port wine to the taste. If the stimulant or spice is not wanted the other part is a palatable, nutritious food. A small quantity, wine glass to small teaspoonful, every two or three hours, rather than more at longer intervals, for reasons given. Artificial digestants are most useful with iron, quinine, strychnia and arsenious preparations to the feeble convalescent. Mellen's food and milk, with or without brandy. They must be nourished. Dr. Delafield is right; they *must* have food. Patients have starved to death on champagne and whisky. Sir Morell Mackenzie, so lately dead of la grippe, wrote strongly when he said of the disease, there is a "profound impression on the nervous system," a "deterioration of nerva force, prolonged and sometimes permanent." He urged the "stimulating and building up diet and hygienic treatment to ease and assist functional activities."

The complications and sequellæ of la grippe are numerous and varied.

Until this last epidemic I had not seen such frequent tendency to profound or dangerous interruptions of the heart's action, not to be ascribed to change of treatment at my hands. We had, evidently, in portions of our country the nervous form of influenza, of which that elegant gentleman and charming writer and talker, Samuel Henry Dickson, said: "The number of deaths in the city of London from epidemic cholera was less by a considerable amount than that produced by the next year's invasion of influenza." "Perhaps the most common of human maladies, and may be affirmed to constitute, directly and indirectly, one of the widest outlets of human life." The journals, the public press, both American and European, personal observation and that of associates over our State and country, made familiar the expressions "heart failure," "heart trouble," "paralysis of the heart" (much used in Louisville, Ky.), in the epidemic just passed. This caused me to write many of our most prominent American medical men, saying: "I know that

epidemics, historically, differ greatly, but can you offer any explanation for the greater frequency of 'heart failure' or 'paralysis of the heart' in this than in the epidemics just preceding?" I am greatly indebted for this intellectual symposium. It will be readily seen that I did not confine my question to the general practitioner. Here is a letter from a most careful reasoner, distinguished teacher and writer:

3900 SPRUCE STREET, PHILADELPHIA, March 9, 1892.

Dr. J. D. Burch, Aurora, Texas.

DEAR SIR: In answer to your question, "What reason can you offer for the frequency of heart trouble in the recent epidemic of influenza?" I can only say that the reason is in the essential nature of the disease. It is a pandemic disorder, *i. e.*, it occurs in widely separated regions simultaneously, and must be inferred to arise from some condition or contents of the atmosphere. It assumes a great variety of types, in which it resembles the zymotic diseases generally, but is peculiar in the great variety and dissimilarity of its local manifestations. The only constant phenomenon it presents, whatever the organs which it specially affects may be, is extreme prostration, which bears no direct relation to the other phenomena of the attack. This debility can only be explained by some peculiar affection of the nervous system or of the blood, or of both at once. No specific lesion of either has been demonstrated, but it seems to be admitted that a specific micro-organism does exist in the respiratory mucous membrane, in the blood and, perhaps, elsewhere. If this view is confirmed it would explain the variety of types presented by influenza, such as the pulmonary, the cerebral, the intestinal, etc., and it would account for the singular persistence of the nervous debility and the irritability of the heart observed in a greater or less degree in all epidemics of the disease, and which in your late epidemic appears to have reached a maximum.

Yours respectfully, ALFRED STILLE.

Here is a letter from a man whose name is familiar across the continent, the president of the American Medical Association:

BOSTON, MASS , March 8, 1892.

DEAR DOCTOR: Thank you for your letter of inquiry, but I really have no opinion worth quoting as to the cause of the recent epidemics that have swept over both continents. Of its results, few physicians, east or west, north or south, but have been made painfully aware, and of long-continued debilitating consequences. Yours sincerely, HENRY O. MARCY.

Doubtless before me are worthy students of this well-known teacher:

Dr. J. D. Burch, Aurora, Texas. NEW ORLEANS, LA., March 5, 1892.

DEAR SIR: I have not been a careful student of la grippe, but I incline strongly to concur with many others who believe the disease to be due to a poison or toxine engendered by a germ; that this poison acts specially on the nervous system, and often markedly so on the vagus, thus affecting both the heart and respiration. Yours very truly,

STANFORD E. CHAILLE, M. D.

This from an eminent gynæcologist and beautiful writer:

600 MADISON AVENUE, NEW YORK, March 7, 1892.

DEAR DR. BURCH: I am entirely unable to explain the phenomenon of which you ask, unless it be that the nomenclature, "heart failure," has become a fad of late. La grippe has been fatal here only by creating pulmonary sequelæ. Sincerely, F. GAILLARD THOMAS.

This is from a wonderful diagnostician and able teacher and writer, whose name you all know:

1700 WALNUT, PHILADELPHIA, PA., March 8, 1892.

Dr. J. D. Burch, Aurora, Texas.

MY DEAR DOCTOR: In answer to your letter, I think that both in this and in the epidemic of influenza of two years ago the cardiac symptoms were very common. They depend, in my judgment, upon the depressing influence of the poison itself on the nerve supply of the heart.

Yours very truly, J. M. DA COSTA

This from an eminent physiologist:

BELLEVUE HOSPITAL MEDICAL COLLEGE,
NEW YORK, March 7, 1892.

Dr. J. D. Burch, Aurora, Texas.

"Heart failure," "paralysis of the heart," and many such expressions, convey to me no very definite ideas; but I have always found cases in which recovery from la grippe was very slow. The question in your letter is very difficult to answer. Yours sincerely, AUSTIN FLINT.

From the University of Virginia, medical department, chair of practice, this, by the pen of a scholar of highest authority:

Dr. J. D. Burch, Aurora, Texas. March 8, 1892.

MY DEAR DOCTOR: Your letter of the 3d was received Sunday afternoon, but I have been so busy since that I have not had time to reply till now. Your account of the greater frequency of "heart failure" in your

section during the present epidemic of la grippe than in the previous epidemics is very striking. I hear that similar observations have been made in Louisville and elsewhere, and I know no cause for it whatever. We have had a different epidemic here. In the winter of 1889–90 I attended 323 cases of la grippe, and it was *far more severe* that year than since. Last year (1890–91) I saw only about 80 cases, and thus far I have seen about 150 during the present epidemic The death rate here, however, has been small, though the symptoms were often very alarming. I saw a few days ago (in consultation), in another part of the State, a lady about seventy-three years old, whose general health was excellent, who was suddenly taken with a series of quite severe chills, coming on irregularly and followed by high fever and a semi-comatose condition. There was not a *suspicion* of malaria in the case, and our view was that she had la grippe. I am glad to say that she is now recovering. I don't know why some epidemics are so much worse than others. I have been giving recently in the early stages phenacetin, caffeine and atropia, and later on have substituted solol and quinine for the phenacetin, and this treatment has been very satisfactory in my hands. Yours very truly,

WILLIAM C. DABNEY.

Another name, very high authority on nervous diseases, this note:

WASHINGTON, D. C., March 6, 1892.

DEAR DOCTOR: I have not had my attention directed to the subject of heart failure in connection with la grippe. I send you, however, a monograph of mine on "Weak Heart," which may prove of some interest to you. Yours sincerely, WILLIAM A. HAMMOND.

From a distinguished writer, teacher and student, needing no introduction, this:

UNIVERSITY OF PENNSYLVANIA,
OFFICE OF THE PROVOST, March 7, 1892.

Dr. J. D. Burch, Aurora, Texas.

DEAR DOCTOR: I wish I had time to answer your interesting question carefully. I do not think there have been as many deaths during the last six months as in a like period in former years of this great epidemic. Both the profession and the public are more aroused to the dangers, and observations are more accurate and frequent. Besides this, I think there is no doubt that the general health and resisting power of the community have been reduced by the long prevalence of the epidemic influence. Moreover, I attribute a good deal to the fact that there has been a serious period of financial depression; many persons have been anxious, overworked and depressed. All this contributes its share toward making them less able to bear an attack of serious acute disease. I think the causes of

death you mention are usual expressions of nervous exhaustion affecting one or other nerve center, as may happen in different cases

Yours truly, WILLIAM PEPPER.

From the father of the American Medical Association, to whom we are all under so many obligations, this letter of thought and warning:

65 RANDOLPH ST., CHICAGO, ILL., March 3, 1892.

Dr. J. D. Burch, Aurora, Texas.

DEAR SIR: Your letter is received. All the epidemics of influenza or la grippe of which we have had any accurate history have been characterized by nervous and muscular weakness, often extending through a protracted convalescence and accompanied by marked increased mortality from pneumonia and acute affections of the respiratory organs. The prevalence of the disease during the last three years has been accompanied by the same characteristics, with the addition of greater development of gastric and intestinal irritation and striking impairment of the functions of the vaso-motor, cardiac and respiratory nervous systems. Whatever may be the specific cause of the disease (whether bacterial, toxalbumose or meteorological), it plainly has a strongly depressing or paralyzing influence over the nervous centers of animal life, and this quality has been more strikingly manifest this year than at any time before. I think, however, a large part of the cardiac and pulmonary failures and protracted nervous prostrations encountered in the present epidemic have been caused by the almost universal administration of so called alcoholic stimulants and such antipyretics as salicylates, antipyrine, phenacetin, etc., all of which directly diminish the taking up of oxygen from the air cells of the lungs, and the elimination of carbolic acid, and equally diminish the sensibility of the cerebro-spinal nerve centers. While they reduce the pyrexia, charmingly relieve the pains and restlessness, they are rapidly impairing the functions of the blood corpuscles, and so for paralyzing the vaso-motor nerves as to stealthily invite a fatal pneumonia, pulmonary œdema or cardiac paralysis. I have treated no case of influenza or la grippe during the last three years that terminated fatally, and I have given none of the remedies just named in their treatment. * * * Yours truly,

N. S. DAVIS.

The last letter is from one whose name is as familiar as any other given. Stonewall Jackson's surgeon writes as he handles a knife—decisive, clean cut and to the center of the matter:

Dr. J. D. Burch, Aurora, Texas. RICHMOND, VA., March 8, 1892.

DEAR DOCTOR: I wish I could answer your question satisfactorily. In the last epidemic of la grippe the tendency was to pneumonia. In this

epidemic the tendency is to death by heart failure. In the first the disease seemed to expend itself in catarrhal symptoms. In the present it attacks the nerve centers, spinal cord and brain. To say why, is to go back to the origin of disease. This we can not do. I am afraid you have got a difficult question to determine. Very truly yours,

HUNTER MCGUIRE.

At the close of last year, before the Medical Society of London, Dr. Althaus made for discussion, these affirmations: "1. Influenza was an infectious nervous fever, caused by a special poison (grippo-toxine) circulating in the blood and causing congestion of the medulla oblongata. 2. Perfect or imperfect recovery from an attack of influenza was owing to a sufficient or insufficient quantity of an antidote (antigrippo-toxine) being formed in the serum of the patient. 3. Immunity once acquired might be lost again by the disappearance of the antigrippo-toxine from the serum. 4. Grippo-toxine resembled the syphilitic virus in its tendency to attack all parts of the nervous system after the attack was over, but surpassed the syphilitic toxine in virulence and rapidity of action. 5. The three varieties of influenza—nervous, catarrhal and gastric—were not distinguished from one another by any pathological characters, but only by localization of grippo-toxine in different areas of the bulb. 6. The nervous form of la grippe was owing to congestion of the thermolytic, cardiac and other centers in the bulb. 7. The catarrhal form of la grippe was owing to congestion of the nervous mechanisms formed by the nuclei of the fifth pair and the vago-accessory nerves in the bulb. 8. The gastric form of la grippe was owing to congestion of the vomiting center of the bulb, the shock being sometimes transmitted to the splanchnic nerves, which are astomosed with the pneumogastric in the cœliac plexus. 9. There were afebrile cases of influenza, the principal symptom being intense mental depression, leading sometimes to suicide. 10. Until the antigrippo-toxine should have been isolated, revaccination with animal lymph appeared to be the best preventive."

It is too soon to affirm or deny the theories or hypotheses of pneumo-toxine or grippo-toxine. I confidently submit them to

distinguished members of this association fond of the microscope and well versed in pathology, chemistry and bacteriology.

I have watched with increasing zeal the splendid work in surgery and medicine accomplished by the younger members of this body. All hail to them!

DISCUSSION.

H. A. WEST, M. D., of Galveston: I have listened with a great deal of pleasure to the very able paper of Dr. Burch, and was especially interested in hearing the replies from numerous eminent gentlemen in response to his interogatories concerning the frequency of reported "heart failure" as the immediate cause of death in the recent epidemic of influenza. There is one explanation occurring to me which I have not heard mentioned, and which was forcibly presented to my obserservation during the past winter. I allude to the fact that many of the victims of influenza are the subjects of some chronic disease, either pulmonary, cardiac or nephritic. When a disease is so wide spread and so universal in its sway, necessarily many such individuals will be affected; these complications will not only account for sudden death in many instances, but will explain the large mortality in a disease apparently mild. A person may have a latent tubercular focus, existent in the lungs or glandular organs; he is taken with influenza, the fever, profound nervous depression, and the inflammatory processes, perhaps at the very seat of the tubercular infection, are all favorable conditions for the sudden development of an acute tuberculosis. We have, in fact, the same sequence of events so frequently observed after other acute affectious diseases, *e. g.* whooping cough and measles. In every community there are a number of persons the subjects of compensated and perhaps unrecognized heart disease. As long as the current of their lives run smoothly, they feel no evil effects; but let them be taken with a disease like epidemic influenza, "the golden bowl is broken; the pitcher is broken at the fountain;" compensation fails, the hypertrophied and dilated heart is no longer capable of meeting the demands made upon it, death ensues, and we have an explanation of heart failure. Many of those who die suddenly from influenza are the subjects of chronic diseases of the kidneys. To illustrate, I was called last winter, in the midst of the epidemic, to see an old lady who had not previously been my patient. She presented the ordinary history and symptoms of la grippe, but something about the patient made me suspicious of kidney trouble. I ordered a bottle of urine sent to the hospital for examination, but did not get it until the next day, when I discovered

it was highly albumenous and full of casts. However, before the examination was made the woman was dead. Here was a case of sudden death, fully accounted for in the light of the revelations furnished by the urine, but without which the verdict would have been "heart failure," pure and simple. Thus it seems to me extremely important not to leave out of view these common complications as largely accounting for heart failure as a cause of death following epidemic influenza.

THE MORPHINE HABIT.

W. B. BROOKS, M. D.

DALLAS, TEXAS.

Mr. President and Gentlemen of the Texas State Medical Association—I beg leave to have your earnest and careful attention for a few brief moments to a subject that appears to me to be of immense importance to every physician, and one that effects, for weal or woe, the health, happiness and even the lives of many an unfortunatc sufferer under his care. To one that has directed his attention to the subject for the past twelve or thirteen years it is perfectly astonishing and incomprehensible to see the lack of interest, the misconception, the false ideas and profound ignorance of many general practitioners upon this important subject. For there is a mistaken opinion held, not only by the laity, but by a large number in the medical profession as well, that those who—often by force of necessity quite beyond their control—have become victims to opiates are simply the slaves to a vicious indulgence, deserving censure rather than charity. I was talking recently with a prominent physician, highly educated and well posted upon most every branch of medical science. When the subject of the treatment of morphine habitues was mentioned he sneeringly remarked, "Pshaw, there is no use in treating them; they could quit it themselves if they wanted to; they don't want to quit." Another intelligent physician made the remark that "there was but one treatment for the habit, and it was very simple; that was to gradually reduce the dose and substitute strychnia in its stead." Is it not astonishing that intelligent physicians in this enlightened age should be so illy posted in regard to so prevalent a disease as morphinism? The fact is that until recent years the subject has been ignored by the profession or relegated to quacks. It

is high time that we were assuming the responsibility that properly belongs to us and using our endeavors to relieve these unfortunate victims, and, what is of still more importance, to try to use every prophylactic means to prevent those who may consider us the guardians of their health and lives from forming this enslaving habit. If this paper should be the cause of saving even one poor human sufferer from being precipitated into this awful habit, or of rescuing him from it, if already formed, I shall feel fully repaid for my time and trouble in preparing it.

THE MORPHINE HABIT.

I use the term "The Morphine Habit" because it is simple, plain, well understood and the one most generally used at the present day. Of course under this title I include every form of the habitual use of opium, or any of its preparations containing morphine. Many able physicians who have made a thorough study of this subject contend that the word "habit" is erroneous and misleading; that this peculiar condition is a disease, and should not be classed with the habits. They propose the terms "morphiomania," "morphinism," "opium disease," etc. They undoubtedly present some strong arguments in favor of their position. They claim that the peculiar meaning conveyed by the term "habit" is some state or condition voluntarily acquired and retained, but which can be thrown off at any time by the will of the subject. As regards the habit being a disease, I fully agree with these eminent authorities. So that in using the term "morphine habit" I wish to be understood as meaning a disease produced by the continued and habitual use of morphine. What the special pathology of this disease is, has not been clearly demonstrated; but that a disease exists can hardly be questioned.

When we find a person able to take repeated poisonous doses of such a drug as morphine with perfect impunity, and that such doses are absolutely essential to his bodily comfort, or even necessary to sustain life itself, certainly this is sufficient evidence that some change has taken place in the animal econ-

omy; that a departure from normal action is set up, and that a pathological condition is established. These pathological changes appear to take place chiefly in the nervous system, more particularly in the great nerve centers.

WHAT IS THE MORPHINE HABIT?

As simple as this question may appear to some of you, there are many, even among learned physicians, who have but a faint idea as to what the habit consists of in its entirety. We will endeavor to briefly answer it.

If a hypodermic injection of morphine, even in moderate quantity—one-fourth to one grain—be administered two or three times daily for from one to six months, the time depending upon the constitution of the individual, some peculiar, and as yet unknown, morbid change takes place in the nerves or nerve cells, so that if the injection be suspended suddenly and entirely very severe nervous disturbances are induced. An obstinate headache, vertigo, tinnitus; wakefulness, interspersed with snatches of sleep, disturbed by horrible dreams; during the waking moments an inexpressible anxiety, gloom and depression. The subject feels as if he were dying; there is unappeasable restlessness, with an overpowering sense of fatigue and a deep-seated aching in the arms and legs, extending more or less over the whole body; the throat burns, the stomach feels as if wounded or scorched; coals of fire and streams of molten metal seem to ooze along the spine from the head to the sacrum; the respiration is hurried, as much as 100 times to the minute; the pulse may be 150 times to the minute; there is nausea, vomiting, repugnance to food, intestinal pain and diarrhœa; with all this there is a very great depression of the powers of life; a weak, small pulse, becoming rapid and thready on exertion; coldness of the surface—a cold, clammy sweat. In fact, gentlemen, every nerve in the body, from the crown of the head to the soles of the feet, and every cell and fiber of the entire system is crying out in agony for its accustomed stimulus—morphine.

There are very few morphine habitues who have not experienced more or less of the sensations depicted above, caused by the suspension of the drug—sometimes necessarily, when it could not be obtained; often voluntarily, from a desire and a heroic effort to discontinue it. But all in vain; the morbid impulse, like the delirious thirst for water on a desert plain, completely dominates all reason and so-called will power, as well as every consideration of life and surroundings.

Marvellous, indeed, almost magical, is the change when the regular dose of morphine is once more administered. All of the disagreeable and painful sensations, and the dreadful unrest, which had but a few minutes before caused such indescribable sufferings, have now vanished, and in their stead are present a feeling of perfect comfort and an active state of body and mind equal to any effort. Under these circumstances can you blame the poor sufferer from continuing the use of the drug? Would you not do so under the same circumstances? I have frequently had persons to tell me that there was no danger of their ever getting into the morphine habit; that the drug had no pleasures for them; that they had a very strong will power and immense self-control. Now, while I am fully aware of the fact that some constitutions and some temperaments are much more prone to contract the habit, nevertheless it is my honest conviction that there is not a man living who can not be gotten into the habit, and to that extent, too, that no will power on earth could cause him to suddenly discontinue it; and instances are very few, indeed, where the confirmed victim of the morphine habit, by will power alone, has succeeded in emancipating himself from his bondage, even by gradual reduction.

This terrible, enslaving habit must not be confounded with the infinitely less enslaving whisky and tobacco habits. The drunkard has often been known to forsake his cups, and the tobaccco victim his pipe, cigar or quid, never again resuming the baneful habit; and all by the strength of a will which, once asserting itself, is never again overcome, despite temptation and the intense craving for an accustomed stimulus. But the un-

happy morphinist, when once brought to view with horror the abyss of ruin in which he is sinking, is not likely to escape without extraneous aid.

The occasional administration of morphine, even once or twice a week, in large quantities and extending over a period of years, although it endangers the formation of the habit, does not necessarily establish it. De Quincy took opium in this manner for eight or nine years before he got to taking it daily, or found it to be necessary to his health or comfort. The morphine habitue must have the drug daily, and generally twice a day or oftener. Then the morphine habit consists in a peculiar condition of the system (some unknown alteration in the nerves or nerve cells, perhaps) brought about by the daily use of the drug for several months, rendering it necessary to health and comfort, and even to life itself, that it be continued, and placing it utterly beyond the power of the victim to abstain from its use. Surely this is a disease.

THE COURSE OF THE DISEASE.

This may be divided into four stages. First stage—the period of excitement and pleasure. When a person first begins the use of morphine it creates a feeling of pleasure which may be likened to the effect of good wine upon one who is not accustomed to its use. This period is of variable duration, according to the peculiar constitution of the subject. In some it is hardly felt at all, even at the first, or rapidly passes into the second stage; in others it may last for months, and in very rare cases even for years. The average duration of this period may be said to be from three to six months.

The second stage is that of intolerance of the drug. It fails to produce that excitement and pleasure that it did in the first stage; it simply relieves the pains, the discomforts and unpleasant feelings, and makes life bearable, though not enjoyable. This stage, like the first, is variable in duration, from a few months even to many years, and in rare instances for a life time, depending, as before stated, upon the pecular constitution of the

subject. Ordinarily the victim uses during this stage a daily quantity of three to eight grains of morphine, some even tolerating a daily quantity of fifteen or twenty grains for a considerable time.

Third stage, or that of tolerance. To most morphine habitues there comes a time, sooner or later, when he finds that the accustomed dose does not bring the desired relief; he is bound to increase the dose from time to time in order to make life endurable. Three to five grains are rapidly, or, perhaps, gradually increased to ten, twenty and thirty, or even fifty grains a day, and still the drug fails to bring the relief that it formerly did. Such doses as these of a poisonous drug must soon produce deleterious effects upon the human economy. Disorders of digestion, which were slight before, become more serious; there is loss of appetite and flesh; the countenance assumes a yellowish, earthy tint and the eyes grow dull; the skin becomes dry, the muscles dwindle and become flabby, and sometimes edematous. The patient now suffers from sleeplessness, or with distressing dreams and nightmares; there is loss of memory and great enfeeblement of the moral sense. Subjective pains are experienced in all parts of the peripheral nervous system, with sensations of pricking and of crawling. The universal disturbances of nutrition is further illustrated by the rapid decay and loss of the teeth, and by the early development of baldness. The sexual appetite is totally abolished; the female becomes sterile and ceases to menstruate. If these enormous doses are continued, death sooner or later closes the scene. However, it is frequently the case that the unfortunate victim, realizing the deleterious effect of the drug and failing to get that relief from large doses that he expected, by a Herculean effort succeeds in reducing the dose to one of toleration again.

THE CAUSE OF THE HABIT AND THE CLASS OF PEOPLE ADDICTED TO IT.

In regard to etiology, morphine habitues may be divided into two classes. First, those persons who, by their peculiar nervous constitutions, either heriditary or acquired, naturally have

a craving for a stimulant or narcotic, and who begin the use of the drug simply for its pleasureable stimulating effects. Second, those who have had morphine prescribed as a remedy or have resorted to it themselves for some painful chronic affection, unconscious of the ruin it will bring upon them, and are forced to continue its use after the subsidence of the disease, or because of the persistence of the affection for which it was originally given.

With the first class it is evident that at the commencement the morphine taking is more or less a vice, but this does not apply to them when the habit is once formed. With rare exceptions, this class of habitues is doomed. It would do but little if any good to break them of the habit, as the same cause for taking the drug exists that did at the commencement. With the second class, which constitutes much the larger number, the case is quite different, and to them should our earnest sympathy and efforts be extended, in order to rescue them from their impending doom.

The introduction of the hypodermic syringe has given a wonderful impulse to this dreadful habit, and it may be seriously questioned whether the world would be gainer or loser by the discovery of subcutaneous medication. The number of persons who are now confirmed opium habitues in the United States has multiplied ten, yes, a hundred and perhaps a thousand fold since the introduction of this instrument. A comparative estimate makes the number of cases in this country over one hundred thousand, and rapidly increasing. Who is to blame for this condition of affairs? Gentlemen, it is with the deepest sorrow and regret that I have conscientiously to answer that in a large number, if not the majority of cases, it is the physician. At the present day almost every physician carries in his pocket a hypodermic syringe with a solution or tablets of morphine, and generally the first thing he does upon visiting a patient suffering with pain is to inject morphine for its relief. Nay, more; if the complaint should prove to be persistent or chronic, he will continue these injections daily for weeks or months, and,

what is far worse, when he finds that it necessitates frequent visits, for the convenience of the patient and to save himself trouble he leaves a hypodermic syringe with his patient, or has him procure one, and instructs him in its use. Anyone who has been given a hypodermic injection of morphine once a day or oftener for four weeds is in imminent danger of becoming a slave to the habit. And this risk is largely increased, in fact is almost made a certainty, if the patient knows what he is taking and is allowed to administer the medicine himself.

Some of you may assert that this is a false accusation—that you have been giving hypodermics of morphine for years and have never yet made a morphiomaniac out of one of your patients. I can only answer by warning you not to be too certain of your position. When you dismiss your patients you may think that the morphine injections are discontinued; too often is it the case that the poor victim, finding it utterly impossible to do without the opiate, continues it secretly, knowing that it would be considered a vice by the physician, as well as by the family and friends. I only know that the majority of cases that come under my treatment give this history. To illustrate how the habit may be concealed, one woman, the wife of a physician, whose husband was the cause of the habit being formed, writes me that she has been taking morphine for seven years, and that she would under no circumstances let her husband know it; that he would be so angry, as he looks upon the habit as a vicious and inexcusable one. Now, if a physician's wife can conceal it for years from her husband, may not your patients do the same thing with you? Medical men themselves are more prone to the formation of the habit than any other class of men. This is to be accounted for by the fact that physicians have always in their possession morphine and a hypodermic syringe, and that they know so well the speedy relief from pain, from whatever cause, which the injection of morphine affords. Any physician suffering from painful dyspepsia, headache, neuralgia or any other painful affection, and who tampers with the drug at all, is most certain, sooner or later, to

become a habitue. Obersteiner's remark as to the retributive justice of the morphia nemesis to those who, as he truly asserts, directly assist in enlarging the ranks of the opium devotees, suggests a topic worthy of no little reflection. For if medical men are justly charged with the propagation of this disease, owing to their carelessly or for mere convenience sake, leaving morphine and a hypodermic syringe with the patient, may it not be regarded as their punishment that the demon, morphinism, finds among them his favorite victims? If physicians would take more pains to search out and remove the original cause of the morphine malady; if they would be more sparing in the use of the hypodermic injections, never resorting to them till other and safer means have failed; if, moreover, they would see to it that these hypodermic injections shall never be administered by the patient to himself, but always by the medical attendant; and, finally, if the druggists could be brought to exercise proper care and vigilance in dispensing morphine, never giving it except under a physician's orders, the evil would be very much lessened.

PROGNOSIS.

The prognosis, so far as the immediate cure or breaking up of the habit is concerned, is very favorable. In fact, frequent experience warrants the assertion that *every* case of the morphine habit free from chronic, painful, organic disease, and in whom there is an earnest desire to recover—be the extent and duration what it may—admits of prompt and positive relief. The prognosis, however, so far as relapses are concerned, is by no means so favorable; for relapses will occur to some extent under any and every plan of treatment, various factors affecting the question. One general principle, however, covers all. If a person patient himself to the same influences that induced the first attack, he will have a second—nay, more; the first addiction begets a peculiar susceptibility, that increases the chances of the second. When convalescents from malarial disorders can live in malarial districts without endangering re-

lapses, then can the ex-opium habitue live in reach of an opiate without danger.

TREATMENT.

The first, and, in fact, the main object in view in the treatment of the morphine habit is to discontinue the use of the drug. There are three methods of doing this: (1) Immediate withdrawal; (2) gradual reduction; (3) rapid reduction.

Each of these three methods have some strong advocates among prominent physicians who have given the subject thorough study and who have had large experiences in the treatment of the habit. Each method has its advantages and disadvantages.

The first method, or that which advises sudden withdrawal, in which the supply of morphine is at once stopped and forever, is known as the Levenstein treatment, having been largely practiced and highly commended by that physician. This method can only be carried out in an institute where the rooms are specially prepared for the purpose. The suffering is truly horrible, and the wild and maniacal delirium is so great that the walls must be padded and everything removed from the room with which the patient could possibly injure his attendants or commit suicide. The patient must be constantly watched by one or more nurses, and the medical attendant always within ready call to administer the proper remedies in case of collapse. Even Levenstein, its strongest advocate, acknowledges that the treatment is only applicable to robust patients, and that he has had to modify it, and in many instances to have recourse to opiates to save life. It is hardly necessary for me to protest against this method as being barbarous and inhuman, besides being dangerous to life.

The second method, or that of gradual reduction iu the daily dose so as to be barely noticeable to the patient, would appear to most persons the most rational, but it has been proven to be better in theory than in practice. Very few morphine habitues but have tried this method upon themselves time and time again, only to result in failure, before applying to a physician

for aid. The disadvantages of this method are several. The prolongation of the morbid phenomena which characterize the abstinence of the drug, it requiring many months to effect a cure. The patient is long kept in a state of irritation, teased and tantalized without being satisfied. He is kept in misery and loses strength and flesh. The abstinence symptoms are less severe for any single day, but the sum of the discontentment will be greater during the slow process of leaving off than during the quicker processes.

Dr. E. P. Hurd says: "I do not hesitate to declare that this slow method is wholly unreliable and unsatisfactory. I had ten years' experience with it in our institution, only to be more and more convinced of its worthlessness."

Erlenmyer says: "I formerly depended on this method, but being convinced of its unsatisfactory character, some years ago I abandoned it for what has proved a more rational system. Morphine habitues who have gone through the different cures are almost unanimous against the slow treatment. One of my patients, himself a physician, who has twice tried Barkhart's slow and twice Levenstein's sudden method, has assured me that my rapid method is far the easiest; and he affirms that he would rather, if necessary, submit to the sudden than to the slow method of cure, the latter being a terrible ordeal to the sick man, who, to quote my patient's language, suffers like the 'dog whose tail is cut off by inches.'"

Nevertheless there are many undoubtedly good authorities, among whom is Bartholow, who favor this method. I have had considerable experience in treating patients at their homes by this method, and though I am satisfied that by proper remedies the suffering can be reduced to a minimum, the results have not been by any means satisfactory. However, I attribute this more to the fact that they were treated at their own homes than to the method employed. While occasionally cases of the morphine habit can be successfully treated at the home of the patient, even allowing them to pursue their usual avocations, the majority of attempts in this direction will result in failure. The only

place where the habit will ever be treated successfully to any great extent will be at the residence of a physician prepared to receive such patients and to give them almost his entire time and attention, or at an institute specially designed for the purpose. At either of these places there is no good and sufficient reason why every patient that enters should not leave cured of the habit and without the least desire for morphine.

THIRD METHOD, OR RAPID REDUCTION.

This effort may be considered a mean between two extremes. The morphine is not reduced so suddenly as to cause such intense suffering, wild and maniacal delirium and tendency to collapse, thus endangering the life of the patient. Nor is the reduction so slow as to prolong the treatment, and its attendant unpleasant symptoms, to an undue length of time. It is the method adopted by the majority of institutes and homes for morphine habitues at the present time, and is better adapted to them than to the treatment at the homes of the patients. In fact, its greatest advantage is, that few persons being able or willing to spare the time or means to remain from home longer than one month, the morphine is rapidly reduced and discontinued in from eight to twelve days, leaving two or three weeks for building up the general health and strength of the patient, a very important item.

There is positively no drug that will take the place of morphine in these cases, or answer in any manner as a substitute, but there are many drugs that will assist in and facilitate the withdrawal of the opiate and render the patient more comfortable during treatment.

The rapid reduction method may be divided into two general plans, that of stimulation and that of sedation. Both have their advocates and both their appropriate places. I will not take the time at present to consider the stimulating treatment, but will give a brief sketch, without going into the details of the treatment by sedation, applicable to the majority of cases and which has proven the most satisfactory in my hands. I allude

to that first recommended by Dr. J. B. Mattison, of Brooklyn—*preliminary sedation with the bromides.* When a patient applies to me for treatment I assign him a room in my residence, and endeavor from the first to gain his entire confidence. I request him to turn over to me what morphine he has with him, at the same time assuring him that at any time he wants a dose, and will ask for it, he shall have it. This promise I strictly adhere to in every case. Many patients pass through the entire treatment without asking for morphine a single time. If they suffer and call for relief, I endeavor to give it with other drugs, but if I fail I resort to morphine at once. I never search their effects or use any measures to prevent them from clandestinely obtaining the opiate. They are allowed to go out in the city, to the opera, or where they will, and I have never had cause to regret this course. I began the administration of the bromide of sodium at once, in ten-grain doses three times a day, increasing it daily according to symptoms, sometimes giving as much as one hundred grains at a dose. I reduce the morphine as rapidly as circumstances will allow. Generally by the eighth day, sometimes the twelfth, or even later in rare cases, I have the daily dose reduced to one-fourth or one-half grain. By this time symptoms of bromism make their appearance, which is the signal for immediately discontinuing all morphine. In other words, the administration of the bromide and the reduction of the morphine must be so regulated that the maximum sedative effects of the former and the maximum nervous disturbance from the final morphine withdrawal shall occur at the same time. The abstinence symptoms, which usually occur after the final withdrawal of the morphine, under any other treatment are usually very light under this preliminary sedation. They pass off entirely in from one to four days, and the patient is convalescent.

I do not wish to lead you into the erroneous belief that all patients can be carried through this treatment with as little trouble as indicated by the brief history of it as given above. In some instances the patient may have scarcely a bad symptom

to arise, and suffer almost no pain or other trouble, but in others very troublesome symptoms will unexpectedly make their appearance, and difficulties will arise that will at times appear almost insurmountable. It will frequently require the utmost patience and an intimate knowledge of the effects to be derived from the various narcotics, hypnotics, heart and nerve stimulants and sedatives, etc.

One of the first symptoms to make its appearance is delirium. This is usually mild and harmless, and need not be noticed. It is generally an indication that the opiate reduction is being effected too rapidly, though I have seen some patients that would become delirious upon the least reduction of the opiate. A slight increase of the morphine administered will promptly dispel it. As a rule, this is almost the only unpleasant or troublesome symptoms that will appear until after the final withdrawal. Then, for from one to four days, we may expect others, that are not so easily relieved. Insomnia is generally overcome by cannibus indica, choralamid or sulphonal. Pains in the calves of the legs, or sometimes over the whole body, are relieved by hot baths, rubbing, electricity, galvanic or farradic currents, cannibus indica, Jamaica dogwood or quinine. If these all fail, I resort to codeine hypodermically. Slight diarrhœa may be let alone; if exhaustive, which is rarely the case, fluid extract coto will prove beneficial; also, subnitrate of bismuth in large doses. Should these fail, a little laudanum will almost immediately arrest it.

Collapse will seldom occur after this treatment. However, I always watch my patients closely during the second, third and fourth nights after final withdrawal. Should symptoms of collapse occur, as manifested by a rapid pulse, irregular breathing, cold extremities, etc., it is perfectly useless to waste time with heart tonics and stimulants; they will do no good. A hypodermic injection of morphine, one-fourth or one-third of a grain, must be resorted to at once, and repeated in fifteen or twenty minutes, if necessary. It is a certain and infallible remedy if resorted to in time. This use of morphine is harmless,

and does not place the patient back into the habit again, as might be supposed. In fact, I frequently find it beneficial to give one-fourth grain of morphine hypodermically the second night after complete withdrawal, and repeated on the fifth night.

As morphine is rapidly eliminated from the system, patients, as a rule, regain their health and strength very quickly. In exceptional cases, in old or debilitated subjects, convalescence is tedious, the appetite is slow in returning, and they remain weak and feeble for some days, or even weeks. In these cases I have found that a dose of morphine or laudanum every two or three nights is of great advantage.

Various other remedies are frequently demanded and find their appropriate place in the treatment of symptoms, only a few of which I have space to mention.

Elixir valerianate of ammonia, digitalis, atropia, chloral hydrobromate of hyoscine, sulphate of spartein, strophanthus, nitro glycerine, strychnia, antikamnia, phenacetine, etc. Alcoholic stimulants of any kind I have found of no benefit, but a positive disadvantage. The same may be said of coca or its alkaloid cocaine. I mention this because they are highly recommended by some authorities.

RELAPSES, THEIR CAUSE AND PREVENTION.

The most discouraging feature in the treatment of the morphine habit is the number of relapses that will occur. These relapses are preventable; they should not occur. There are several causes which tend to produce a relapse into the habit, all or most all of which could be removed if they were properly understood by the patient himself, by his family and friends, and particularly by his physician.

I have only time and space at present to mention one of the most frequent causes of relapse; this is the short time that patients are able and willing to devote to convalescence. It is unreasonable to suppose that the damage done to the system through the use of a poisonous drug in large quantities, continued, perhaps, for years, can be entirely repaired in a few

days. Weeks, and in some cases months, should be devoted to regaining strength of both body and mind before resuming arduous and laborous duties. Physicians, whose knowledge of the human economy ought to enable them to recognize this fact, are the very ones most liable to relapse from this cause. It is seldom that I can prevail upon a physician to remain with me longer than three weeks. Frequently, in a few days after the necessity for the administration of morphine is removed, the appetite returns, the patient feels physically well in every respect, his general tone is cheerful and contented and he thinks that he is mentally fit for work, and is anxious to return home and resume his practice. All argument, reasoning or persuasion avails nothing. He has such confidence in himself and is so sure that he will never again take a dose of morphine that he considers it a waste of time to remain longer from his labors. He is soon undeceived, however; overwork, with loss of rest and sleep at night; exposure to damp and cold, mental worry and irregular habits are soon followed by exhaustion, nervous degression, dyspepsia, neuralgia, rheumatism, etc. Having his hypodermic syringe and morphia in his pocket, and being in a mental condition at the time hardly responsible for what he does, remembering the magic effects of the drug in former times, to relieve himself of suffering, or to enable him to make one more professional call before resting, he yields to the temptation to take *just one* hypodermic of morphine. It is then but a step from this to the reformation of the habit. With members of the laity who persist in returning to their business labors too early a similar result frequently awaits them. They become ill, their physician is sent for, and he at once proceeds to relieve them with an injection of morphine. I know of one case in which the attending physician gave the morphine, even in despite of the earnest protest of the patient that no opiate be given, the physician contending that there was no danger in a few doses of morphine—that it could be easily discontinued as soon as the trouble subsided.

In conclusion, gentlemen, I wish to again urge upon the members of the association the importance of looking upon the morphine habit as a disease; that it is our sacred duty to make it a study, just as we would any other disease; that it is highly time that we, as custodians of the health of the people, were making an effort to arrest its rapid progress in our midst, and, above all, to see that we ourselves are not instrumental in its progression.

DISCUSSION.

Dr. J. H. SEARS, of Waco: A very important point in the treatment, if not the most important, is the willingness of the patient to be treated —the moral effect of the do or die in the effort to get rid of the monster grasp of habit, which makes slaves of them; once more to be free, to be their own masters, and to enjoy life and society as before the enslavement. Having tried various plans, I have adopted the method of gradual withdrawal as the best and most successful in my hands. This consists in preparing a month's supply in some wine, vin marianna, elixir of bark or some other tonic menstruum, containing in one or two drachams or teaspoonfuls a full dose of morphine, the greatest dose used by the patient. This bottle is marked number one. The number two is a solution of strychnia in wine, or some tonic elixir or tincture, containing one-fifth of a grain to one or two drachams; also fluid extract or tincture of canabis indica; full dose twenty to forty drops to one or two drachams. Number three is a simple tonic or wine, *q. s.*, to keep number two full at all times. Directions—Take dose as usual of morphine from No. 1, and replace it with similar quantity from number two; refill number two from number three. Thus the dose is gradually decreased, while the tonic effects of the strychnia and the anodyne effects of the hemp prevent collapse or delirium. In this way the patient is generally able at the end of a month or six weeks to control himself and break off the habit, and be once more free. I think that the dose of strychnia and hemp might be largely increased in many cases with advantage; such patients bear large doses of strychnia and canabis indica remarkably well, as much so as the alcoholics.

Dr. F. S. WHITE, of Austin: I do not desire to discuss exhaustively the very interesting paper to which you have just listened. The paper is a good one and covers the subject most thoroughly, and, in the main, has my indorsement. In regard to treatment, however, I want to say that in this condition or disease no ironclad rule can be laid down in this as in

other diseases; each case is a law unto itself, and treatment must be varied accordingly. All cases can not be treated by the gradual reduction method, the rapid reduction method, the sudden stoppage method, the sedative method or the stimulating method. I do not indorse the sedative method in any case. The system of a morphine habitue is below par, and I do not consider it good treatment to reduce it still further; nerve tonic and stimulants are certainly indicated under such circumstances. I have had some experience in the treatment of such cases, and greatly prefer gradually withdrawing the accustomed opiate and substituting tonic and stimulating treatment, along with good nourishment, and I have always found it a good plan to change the mode of administering the opiate. If the patient has been accustomed to taking it hypodermically, give it by the mouth; and vice versa. The best plan is, I think, if you wish to give the morphia by the mouth, make a solution of the desired strength, and when a dose of the solution is taken out, fill the bottle with an equal amount of water, and in a short time the morphia is reduced almost to nothing. To counteract the effect produced on the system by the withdrawal of the opiate, I usually administer a mixture of *f. e.* coca, *f. e.* nux vomica, and sometimes add *f. e.* belladona. One more point and I am done. It has been my observation that the longer a case has been taking opium the more time is required to relieve them. In every case, before a cure can be reasonably expected, the consent, confidence and assistance of the patient must be secured. I have very little confidence in entirely relieving the habit unless the patient is under the complete control of the physician. In these cases the moral faculties and will power are very much weakened, and as a rule the patient is utterly incapable of controlling his actions and abstaining from the use of the drug if left entirely to himself.

THE RELATION OF CHOREA TO RHEUMATISM.

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The attempt to determine the value of observed facts has led to some of the most important discoveries in the history of medicine, aud has been the motive for the work of the patient investigators who have cleared away so much of untruth and have brought medicine to the near kinship to an exact science which it now claims. Undoubtedly, persistent and consecutive research and study in a single direction yield results unsurpassed in accuracy and fullness of information; but the careful analysis of an aggregation of facts, themselves noted by independent observers laboring in a broader field, is not without value, and sometimes give the key to the most useful discoveries. It is with an appreciation of this fact that the following case is presented as a single link in the long chain of observations tending to demonstrate an intimate relation between the causal factor of rheumatism and chorea.

K. P., white, female, aged twelve years, was admitted to the children's ward of the John Sealy Hospital on February 23, 1892, for acute rheumatism, associated with chorea. The patient's mother stated that she had been seized with vague pains in the limbs in the latter part of January, and that these pains had increased and had finally become most marked in the ankle, wrist and knee of the right side. A few days after the first pains appeared there were observed irregular, spasmodic movements of the limbs, and these became more pronounced, until medical advice was sought. No detailed history of the onset could be gotten, no fever had been noted and no evidence of any rheumatic trouble prior to the attack was obtained. The child had always been healthy—had never had, in fact, any other ill-

ness, and no account of rheumatic affection in her family was elicited. Her father had had an impediment in his speech, and had made several attempts to commit suicide, in which he finally succeeded.

On admission the patient had a temperature of 100° Fahrenheit, a pulse rate of 120, and complained of pain in the right ankle, knee and shoulder, and the left knee and left hypochondriac region. The joints mentioned were swollen, red and tender, and were maintained in a fixed position as far as possible. The respirations were not materially quickened, and no observations were recorded at the time. The urine was acid and dark red, and passed frequently in small quantities without pain. There was moderate sweating, increased at night, but never excessive. Careful ausculation gave no evidence of disease of the heart, or of the pleura, though the pulse rate continued for some time above 120, and the pain in the side did not disappear for some days after admission. There were distinct, and at times violent, choreic movements of the muscles of the right side of the face and of the right arm, while the right leg and the extremities of the left side were but rarely and slightly affected. The right eye was pulled sharply upward and outward during unusual excitement, and some squint in this direction was usually present in the interval of quiet. All movements were much diminished or absent during sleep, though particularly strong contractions were noticed on one or two occasions. No lesion of the skin was present, and there was but little disturbance of the digestion beyond a diminished appetite and constipation. The child was stout, well nourished, and not anæmic to a noticeable degree.

The treatment consisted of a hypnotic to induce sufficient sleep, and only given at long intervals; the use of anodyne dressings to the inflamed joints; an occasional saline laxative; the administration of the salicylate of soda in varying amounts through the entire period of treatment, and, during convalescence, iron, quinine, nux vomica and small doses of arsenic. The choreic twitching subsided in direct ratio to the subsidence of

the rheumatism under the influence of the salicylate of soda, and had markedly improved when the arsenic was introduced. The patient passed from under my observations before recovery was complete, but I am informed that she has now, six weeks after beginning of treatment, no twitching, except a slight jerking of the facial muscles when much excited, and at times during sleep.

Observed by itself this case would seem to prove not only an association of rheumatism and chorea, but a common causation, or, at least, a cause removed by a common remedy; but since general attention was drawn to the subject by Kirk, statistical evidence has steadily accumulated, and has included many facts not so readily interpreted, though today no denial can be made of the association of the two diseases in the same patient or their occurrence in sequence in such manner as to imply more than simple coincidence. See found evidence of rheumatism in sixty-one cases of one hundred and eight affected with chorea, and, with Roger, considered the association so frequent as to prove a common cause. Hughes and Brown found proof of rheumatism in eighty-five of one hundred and four cases; Ziemssen in four of twenty-one; West in sixteen of sixty-six; Sinkler in thirty-seven of two hundred and seventy-nine, and cardiac diseases in eighty-two, but he excluded all cases from the list of rheumatics except those presenting an acute articular inflammation, whatever other symptoms were exhibited; Sachs found eight cases in seventy; Pieper fourteen in thirty; Chapin twenty-two in thirty-eight; Smith states that the diseases coincided in fully one-half of his cases of chorea; Barlow gave fifty-seven per cent; Cheadle fifty per cent; the British Medical Association collective investigating committee thirty-seven per cent in four hundred and thirty-nine cases; Osler found post mortem evidence of rheumatism in one hundred and five cases of one hundred and fifteen of chorea resulting fatally, while Herringham and Garrod each report eighty cases, showing undoubted proof of the relationship of the two diseases, and the list could be still further swelled by a reference to a number of

other statistical records. A hurried examination of the table at hand shows a percentage of twenty-five in somewhat over two thousand cases. On the other hand, Steiner, of Prague, found only four cases of rheumatism in two hundred and fifty-two cases of chorea. Romberg, Niemeyer, Combey and others deny any connection between the two affections, while Sturges, though finding twenty per cent of rheumatics in two hundred and nineteen choreic children, declares this fact of no significance, as fully fifteen per cent of all children have rheumatism in some form.

An examination of the above statements will show a greater proportion of the concurrence of the two diseases in the compilations of the more recent observers, who, it is presumed, have brought to bear improved methods of diagnosis and have been stimulated to more accurate observation by the growing interest in the subject. But there will also be seen a marked discrepancy between careful and close observers, and this demands an explanation. Many physicians have ignored the comparative infrequency of articular inflammation in the rheumatism of children, and the frequency of a rheumatic origin for the vague joint pains so common at this period of life, and have considered those alone rheumatic cases which presented undeniable acute articular inflammation. Others have designated the joint pains choreal arthropathies, and have believed the heart disease following chorea an effect, though presenting exactly the same features as that caused by rheumatism. Others, again, have eliminated all cases presenting evidence of pre-existing or of sequent rheumatism, and have insisted on admitting only those cases in which an actual association was demonstrable. On the other hand the majority of clinicians, and especially the later writers, have admitted as proof of the rheumatic condition the occurrence of endocarditis, pericarditis, or valvular diseases of the heart, before, during or after the choreic attack, the presence of vague or defined joint pains, tonsillitis, erythema nodosum and the tendinous nodules of the subdermal tissues.

Clinical observations having yielded such suggestive results. An examination of the pathology of chorea might be expected to give a better insight into the true nature of the disease, and there are many more or less fully recorded autopsies. So numerous are the lesions found in fatal cases of chorea, that anything like a conclusion as to the true pathological condition would seem impossible. Tumors; tissue sclerosis, softening or destruction; cellular infiltration, degeneration and calcification; various changes in the walls of the blood vessels and in the connective tissue of chord and brain; anæmia, hyperæmia, effusion, blood extravasations, thrombosis, embolism and many other departures from the normal condition have been noted, and in a large number of cases no lesion has been discovered. It is significant that cardiac lesions were found in a certain proportion of all autopsies, and that they were in themselves not to be differentiated from the lesions produced by rheumatism. An explanation of these contradictory findings will be obtained from the fact that widely varying causes will give rise to lesions producing similar effects upon the functions of a given nerve center, and that choreic movements have undeniably arisen from involvement of special nerve tracts in the brain and cord as an incident in the course of diseases and injuries of the nerve system at large.

The theory of embolism presented a plausible solution of the question and satisfied the supposition that the disease arose from rheumatism; but, although still adhered to by many pathologists and strengthened by the artificial production of choreiform, muscular action by injections of minute particles of various substances into the circulation of animals, as in the experiments of Angel Money, and, although emboli have been found in post mortem examinations of fatal cases, nevertheless the most careful and skillful pathologists have failed to find any such condition in a very large proportion of their autopsies, and it can not be considered a universal cause. More recent investigations have not only almost invariably shown an abnormal condition of the nerve centers, but have also revealed a singu-

lar preponderance of altered states of the blood vessels, and circulation in fairly well-defined areas of these tissues.

So many different views and findings are recorded that reference will be made to only a few, which are by competent observors and which tend somewhat in the same direction:

Dickinson, quoted by Sinkler, sums up the pathology as "a widely distributed hyperæmia of the nervous centers, not due to mechanical mischance, but produced mainly by causes of two kinds—one a morbid, probably a humoral, influence, which may affect the nervous centers, as it affects other organs and tissues; the other, irritation in some mode, usually mental, but sometimes what is called reflex, which especially belongs to and disturbs the nervous system, and affects persons differently according to the inherent mobility of their nature." He says, also: "The first visible changes would seem to be the injection or distention of the arteries, succeeded by extrusion of their contents. to the irritation and injury of the surrounding tissues." It should be remembered that these lesions were found in cases dying of chorea, and not in mild cases dying of inter-current diseases.

Dana states that he had found on record about two hundred autopsies, and of them only thirty-nine gave a satisfactory account of the condition of the nervous system, and of these only twenty-five were uncomplicated acute chorea of Sydenham, and of these twenty-five he eliminated six for reasons not stated. Sixteen of the nineteen left gave a record of intense cerebral hyperæmia, periarterial exudation, spots of softening and minute hemorrhages, and occasionally aneurisms. The remaining three cases gave no changes, but he assumed they were overlooked. In chronic cases the changes were more marked; dilatation and thickening of the arterioles, necrotic changes, sclerosis, and in one case fungous growth of the vessels. He concluded that the condition was one of hyperæmia at first—paralysis of the arterial walls, deficient nourishment, dilatation, sometimes thrombosis, sometime exudations, again small neoplasms and hemorrhages; no proliferation of the neuroglia and no inflammation.

The process was one of vaso-motor paralysis, with the changes necessarily produced by its long continuance. As to cause, he stated that there were three things occupying a causal position which were well determined—an abnormal state of the blood, an intense hyperæmia in certain parts and a neurotic history.

Hansford thinks "a widespread hyperæmia of the nervous system" explains all acute symptoms, and the changes consequent upon its persistence the more lasting.

Garrod thinks "the cause of chorea an overgrowth of connective tissues in nerve centers, analagous to the fibrous growths in rheumatism."

Grosse adheres to "cerebral emboli as the causes."

Coates says: "It seems probable that in chorea there is an irritant present in the blood, and it may be the same irritant as in acute rheumatism. It attacks the nervous system, producing hyperæmia and exudation from the vessels. While the whole central nervous system is more or less affected, there are certain parts especially involved, these parts being what have been called the accessory portion of the nervous system. It may be supposed that the fundamental and simpler parts of the brain and cord are more stable than the accessory parts, and when attacked by an irritant the latter will give way first."

Laufenauer considers ordinary chorea as an infectious disease caused by the microbes of rheumatism.

Koch considers that "(1) Chorea is not a neurosis, but an infectious disease; (2) the choreic virus attacks especially the cortico-muscular nerve tracts; (3) the choreic virus is so closely related to that of articular rheumatism that either form of the disease can be caused by it."

Other observers have reached different conclusions from the above, and find no pathological evidence of a common cause for the two diseases.

These statistics prove a definite and frequent association of chorea and rheumatism, and a further analysis shows many points of resemblance not apparent at a first glance. Chorea not only accompanies, but in many instances precedes or fol-

lows rheumatism, and has so close a connection with no other disease, except scarletina, which has a well-known peculiar connection with rheumatism. Both diseases occur in patients having a neurotic history; are accompanied by marked emotional disturbances and anæmia; both originate at times from emotional excitement, overwork or reflex irritation; both are attended by lesions of the heart, which are pathologically the same; both are more frequent in females in childhood, and chorea is caused at times by emboli resembling the formation on the cardiac valves caused by rheumatic inflammation, and in other cases by a change in the tissues of the nerve center declared to be similar to the connective tissue changes produced in many localities by rheumatism.

The state of our knowledge does not at present permit an unquestioning acceptance of the view that the two diseases are but different manifestations of the same cause; but it does not forbid a possible future demonstration of the fact that a specific principle, or virus, affecting the serous surfaces may produce the tissue changes and chain of clinical phenomena constituting rheumatism; and the same virus affecting certain areas or tracts in the nerve centers, either directly as an irritant or indirectly through the agency of the reflexes, or through products of its action on other tissues, may originate the irregular muscular movements and associated disturbances of the economy, which are designated chorea; or, still again, extending its field of action, may involve both sets of tissues and cause an actual coincidence of choreic and rheumatic manifestations. The choice of the route to be followed, the tissues to be affected and the disease to be caused is perhaps determined by hitherto unascertained conditions, and we can only surmise that it will be shown; that, while both diseases are most active always in neurotic individuals, and aroused to either line of action by similar disturbances operating as exciting causes, the determination of the virus to the nerve center, and the production of chorea, is favored by the higher excitability of the nervous system in the female, and the undeveloped condition of the accessory portion of the centers in the child.

WHAT CONSTITUTES THE BASIS OF ANTIPYRETIC TREATMENT IN DISEASE, AND DOES THE ANTIPYRETIC TREATMENT ARREST OR CURE DISEASE?

A Paper Presented to the State Medical Association of Texas by Invitation.

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Limited as to time in the presentation of a paper, it is intended to contain and present the germ thoughts which it is conceived lie at the foundation of practical medicine. Lesion of function and lesion of structure are the problems to be decided by the physician at the bedside of his patient, and by the application of tests, examination of symptoms, of secretions, by chemical or microscopical aids and the knowledge derived from such methods. The relation of blood supply to tissues or organs must be comprehended, and the forces by which it is accomplished, impaired or arrested, lies at the foundation of a rational and comprehensive pathology of disease. The dilatation and contraction of blood vessels, blood or heart pressure, must ever lie behind, and become the foundation of the interpretation of definite pathological conditions and the guide for proper therapeutical administration in all forms of disease. In other words, to show the power of remedial agents to produce effects upon nerve centers, which shall control blood supply; increase or diminish heart pressure; modify, inhibit or control muscular action, as found in muscular spasm convulsions, as seen in epilepsy, in puerperal convulsions, in poisoning by strychnia, tetanus; control fever by the effect of remedies upon heat centers and in the brain, and thus accomplishing in an intelligent manner all the results herein mentioned, as well as testing the integrity of

muscular structure by its response to galvanic action, and aiding centers to return to normal action by the stimulus thus induced by an appropriate remedy.

"Lesion of enervation" is the first link in the chain of morbid action, and I do not misinterpret the writers and teachers of this period, and all along the past, in assuming that this is the trend of progress as we carefully review the groundwork of general and special pathology. A few quotations may not be inappropriate on this point. Liebermeister, in writing of lesions in typhoid fever, says: "The marked disturbances in the functions of the central nervous system, which constitute such a prominent part of the lesions in severe typhoid fever, are in most cases, and in the greatest part, results of the increased temperature; and, further, it seems probable that in the brain, as in other organs, these disturbances are due to disintegration of the brain tissue, resulting from too high temperature." Certain it is that "minute pathological anatomy has so far furnished us with no satisfactory answer to this important question."

Zenker was the first to describe a peculiar degeneration of muscle, and reached the conclusion that this is but a part of the result of the fever (a too high or long-continued temperature), and depends upon derangement of heat centers, which causes high fever, and Liebermeister agrees with him, viz., that the "degeneration" referred to in muscle "is by too long-continued high temperature."

Foster says: "That the rapid alternations of temperature in disease and health are found to be dependent upon certain heat centers in the nervous system, which are rapidly exalted or depressed, as influences affecting the circulation are active or profound; hence the control of heart and pulse and temperature by specific agents do more satisfactorily control disease than any former method of medication." (Foster's Physiology, pages 640, 482 and 483.) It should be remembered here that it is not the secondary lesions, but the primary ones, which are most essentially important, and if we were to mention an example, we should say that the most prominent lesions of typhoid fever are

not due to intestinal and mesenteric lesions, but to the type and severity of the temperature. I am well aware I may be crossing medical opinion at this point, yet I am fully assured, from a long observation, that these are secondary lesions, and have followed more minute primary ones, which are not yet clearly discoverable nor demonstrated, but of which we have proof in the nervous lesions—so called "lesions of enervation." So says Liebermeister. Again, a series of symptoms, which are directly produced by the increased temperature, are those caused by "disturbances in the functions of the nervous system." The same thing is true essentially in other forms of fever where there is marked increase of temperature.

Prof. Symthe says it is plain, then, we must look to the group of secondary lesions for the cause of the heavy mortality in typhoid fever. These structural lesions do not belong exclusively to this disease, but may occur in any disease characterized by an elevated or persistent high temperature, to which they undoubtedly owe their origin. These secondary lesions consist of congestions, inflammations and degenerations of important vital organs, and may include any organ or tissue in the body, as brain, lungs, intestinal glands, muscles (voluntary or involuntary), and these may progress until trembling of muscles, as in the tongue and those of the limbs, just prior to the results of a temperature, sufficient to produce paralysis of the organs.

We come now to the second proposition, viz: What constitutes the basis of antipyretic treatment in disease?

1. To prevent the final results of too high temperature, as shown in both primary and secondary lesions, especially the latter.

2. To prevent the effects of hyper-pyrexia upon the various tissues of the body, producing paralysis of the brain, heart or lungs.

I am well aware that the doctrines of etiology are intimately associated with the idea of germs, and specific germs at that, as causative in the production of disease; but I am not so much

interested in that question as in the control of certain conditions, which are found in most, if not all, acute diseases, and which is, if not pathogenetic, pathognomonic of disease. Let us take typhoid fever again as an example, and we shall find it now a well established fact that the characteristic symptoms of typhoid, as well as of other fevers, as low delirium, subsultus tendinum, picking at imaginary objects, feeble pulse and heart, trembling of tongue and other muscles and emaciation, including lesions of Peyers glands, are not the direct result of a specific poison which induces the disease, but are rather the effect of too high and long-continued temperature, during which the waste of tissue has continued, and which is a result of the high temperature, by which the waste is so great and so rapid that both function and structure suffer to so great an extent as to compromise life. This is effected to such a degree that the blood becomes poisoned by the detritus of tissue, which is (metabolism) by Foster, oxidation, a ripid combustion, or waste, and which waste elements are carried into the current of the circulation to all the organs and tissues, thus impairing the active physiological or normal nutrition, so that no normal balance of forces is preserved; hence, waste becomes greater than supply, and therefore it is only a question as to how long life can be sustained under such conditions. While we have not time to present the mortality statistics of the various forms of acute disease in which hyper-pyrexia is known to exist, suffice it to say that about or less than fifteen per cent of the deaths are shown to be caused by the primary or specific lesions, and the remaining mortality is due to the secondary or structural lesions, and which can and ought to be prevented by a careful and comprehensive "antipyretic treatment." "This has been demonstrated so far as this, viz: Since 1875 up to 1880, inclusive, in the French army the death rate was thirty-six per cent. German statistics give a death rate of twenty-eight per cent in typhoid fever, while the American mortality is still lower, while if we take the percentage of deaths tabulated from the statistics of the entire civilized world the rate is about twenty-five to

thirty per cent. We find further, as an example of reduced mortality, that the death rate was reduced to eight per cent, and afterward to five per cent, and, finally, under the best antipyretic treatment, in sections of the German army the mortality was reduced to one and eight-tenths per cent." (Scientific Review.)

Again, does antipyretic treatment arrest or cure disease? To answer this question correctly we must define clearly what is to be treated. First, is it a primary or specific fever, or secondary and symptomatic? In other terms, what is the nature of the fever? I use the word here in its generic sense. The word pyrexia, or fever, or heat, must be understood, and to do this is to determine if the fever heat is the result of an inflammation or is it produced by some specific germ, and is it a germ disease. Fever or pyrexia belong to both forms of disease, and "fever essentially consists in elevation of temperature, which arises from increased tissue change and must have its immediate cause in alterations of the nervous system." Galen described fever as "calor præter naturam," or preternatural heat, and is the only definition which so far is "accurate and unimpeachable." Hence, in all cases two things must be known, viz., "(1) the amount of heat determined by accurate measurement; (2) the amount of tissue change as is represented by an accurate estimate of all the excreta, relative to body weight." Again, it is a general rule that the correlation of pulse and temperature may be quite accurately stated, as follows, viz: An increase of temperature of 1° above 98½° Fahrenheit corresponds to an increase of about eight beats of the pulse per minute. (Refer to Foster and Aitken; see table in Aitken.) While I have stated the general rule, it is to be admitted that variations as to the rule sometimes occur, and sometimes the pyrexia will be high and dangerous, while the pulse and force of heart does not correspond. This is an exception.

We pass now to the question of the range of temperature as related to the amount of excreta. The particular degrees of heat and waste in every form of febrile disease are related, correlated and represented by "something, and that something is

the excreta." By Virchow, Parkes, Haughton of Dublin, Jones of New Orleans, Wunderlich and others in Germany, this subject has been carefully investigated, and this is the summary by clinical and experimental observation, viz: "That the morbid development of heat as shown by a thermometer is assosiated with more or less abundant excreta than in health, and that the temperature and the total amount of excretions bear some yet undetermined relation to each other, and that the loss of weight of the patient is due to greatly increased and rapid elimination (waste) of tissue material and tissue change, which is associated with the progressive and rapid increase of the temperature of the body." This much is required to be said preliminary to the question before us, viz: "Does antipyretic treatment arrest or cure disease?"

In answer to this question, we say that any remedy, by its action upon nerve centers and by its effect upon heat centers, which inhibits, controls or modifies the range of temperature, is a curative agent. By this I intend to say that any remedy exerting antipyretic influence, as shown by the thermometer, is the same thing as saying it is antimetabolic, or prevents, to the extent of its power in modifying the heat, the metamorphic changes of tissue, and thus condenses the tissues and prevents to that extent the destructive waste which is the essential and dangerous factor in specific forms of disease with a high temperature. We fully recognize the other fact brought to light in this question, that while reduction of the range of temperature or cure of fever in any case is not cure, it is also true that a reduction of two, three or four degrees of heat by the aid of an antipyretic, properly selected, does and must necessarily conduce to the prevention of metabolism, which is often rapid and dangerous. In this proposition, as just stated, then, antipyretics as a class are conservative, and hence curative. Whatever does this is curative, and we have acted upon the principle which lies behind it from the earliest period of medicine in giving food, tonics and stimulants. I am also at differencc with some writers and teachers on this subject, as the question has been

asked, "What do antipyretics accomplish?" and this question has a somewhat doubtful position in the minds of the members of the profession. When we come to an examination of the excreta we refer to Prof. S. Haughton's tables for an approximate amount of urea, founded on many observations of urine in both health and disease. (See tables in Aitken, pages 260, 261 and 732; also, Dr. Parkes' work on composition of urine and rules for the amount of excretion normal to the individual.) We remark that this reference is only to excretion by the kidneys, and shows the value of testing and estimating the character and kind of secretion or excretion, to aid us in forming a judgment of all the details of a case.

Passing now to another phase of the question: If it be determined that antipyretics do what is claimed they must do, they must do it by their action upon the nerve centers; first, by prevention of the generation of heat, and, second, by abstracting or removing the heat already present, and which, if not lessened in any way, becomes an addition to the amount generated in any given time, and thus largely increases the pyrexial curve in the onward progress of the disease. This leads to a classification of antipyrexial remedies according to the power they possess of doing these two last mentioned things.

First, what remedies control nervous action, and by it, in one way or another, lessen the generation of fever? Second, there are remedies which act directly on the brain and sympathetic nervous system to prevent the generation of heat, and, acting thus, act upon the heart and blood vessels, which aids in controlling the blood supply to all other organs. Here it is important to select that class of agents which will accomplish the result desired with the least possible depression of nervous or circulation power, and we have both classes in the list of our antipyretics. Before we had come to our more copious additions to this class of remedial agents, quinia and water represented, first, the class which prevented generation of heat, and water, which, when the heat required was used so as to abstract the heat of the body by its cooling and evaporating power, and

thus, in German practice, reduced the mortality of typhoid fever to one and eight-tenths per cent in seven hundred and sixty-four cases, and a reduced rate all along the line of practice. Another class of agents were found in aconite, veratrum and gelsemium, which produced control of heart and pulse, and thus reduced temperature through action on nerve centers, and, impressing the ganglia within the heart itself, reduced frequency of heart and pulse, reduced temperature, but also reduced the power of heart action at times, so as to endanger paralysis of heart action, and which is always to be deprecated and avoided. Sustain power is a cardinal motive in treatment. Do not depress it. Another class of agents is found in iodine and creosote, preferably carbolic acid, combined together, in some adjuvant; and I have used these with very satisfactory results. Coming to the latter class and yet of these remedies (and their name is legion, in claim, at least), some of them exert a very happy and desirable result upon nerve centers, and also heart and blood vessels, including the skin. Among these we have antipyrine (copyright name antifebrine, chemical name acetanalide), antikamnia, thalline. I shall forbear to mention only those which now seem to occupy the larger field of observation at present. Had I time to do so, and were it within the limits of my paper, I would briefly discuss the primary and secondary effects of two or three leading articles, but a brief reference to the effects upon the nervous system and heart and vessels must suffice. These remedies (antipyrine and antifebrine) are controlling, if not depressing, to the nervous system, and also to some extent by action on nerve centers are so to the heart, which action is to be regulated by the dose. Too large a dose of antipyrine will produce nervous depression and heart depression to the extent of producing dilatation of blood vessels and capillaries, and lividity of face and surface, with sighing respiration. The dose varies within wide limits from three grains to sixty grains, which latter I would say ought never to be given: Two to five or eight to ten grains, according to what is to be accomplished. It reduces temperature, but not so promptly as the antifebrine,

and does not last so long before a repetition of the dose is required. It is a derivative of the chinoline series, and is a white crystalline powder, bitter to the taste and soluble in its own weight of water. Its best result is in relief of pain, hence may largely replace morphine as an anodyne, and in this is superior to antifebrine, while the latter is superior to the former in pyrexia. I will not stop to discuss further the remedies here mentioned, as they are no doubt in your hands and have been tested. I refer the reader to the Therapeutic Gazette, Philadelphia, of March 15, 1887, for a description of the article (antifebrine, *nee* acetanalide), by Cahm & Heff, including its chemical formula (C^6 H_5 NHC_2 H_3 O), as here given.

NERVOUS AND VASCULAR RELATIONS OF ANTIPYRETICS.

In the discussion of this phase of the question before us, it is presumed that there is a definite physiological comprehension of the balance of function which constitutes health, and unbalanced function as an evidence of disease. How far, however, the phenomena of pyrexia are salutary, and how far it may be in its inception and progress, an effort of nature to restore lost balance, or expel a causative agent or germ or poison, is yet a vexed and unsettled question. The reaction of agents in the blood upon certain nerve centers (thermogenesis) is in itself protective and beneficial to the economy, and only when the reaction is too great; in high fever it may be left very much to nature to restore the balance of function. It is not necessary to present an argument, for heat production, at least in the cycle of functions, viz., nervous, circulating and respiratory; and yet, following the trend of my own thought, it begins in the nervous centers as a central force, and may be transmuted into other forces or degrees of force, and is determined to be 98½° normal temperature. This is closely related to the circulation of the blood by a complicated, nervous machinery in heart and blood vessels, by which contraction and dilatation of the same for the purpose of distribution to all the organs and tissues, that cells, tissues and organs may receive appropriate nutritive material

adapted to the wide circle of functions performed in this cosmos in miniature, viz:—a human body. The operations of nature are greatly conservative, and she is jealously watchful of all her miniature agencies. The great muscle of the heart, so wonderfully and singularly adapted to its function that it seems to be automatic contraction of unstriped muscular fiber; and this power is greatest in the ventricles. But what shall we say of its nervous mechanism and its endowment. It is capable of stimulation, first, by nerve centers within its own structure, viz., Ludwig's center, and second, the stimulus of the blood coming into its cavities. All its forces are co-ordinated and correlated in such manner that the nervous system excites, controls or directs, so that the heart and its related blood vessels are excited to alternate dilatation and contraction; and this is rythmical, which is set to time, so that pulse rate and fever rate are so correlated that the law is eight or ten beats to one degree of temperature increased. Furthermore, we have not only pyrexia, which may be possibly salutory, but also hyperpyrexia, which may be found by reference to a good thermometer; hence, we are to be guided by a careful estimate of all symptoms; but we are to be educated as to all the associated relations—as to causation and effect in the degree of fever. Here, had I time, I would suggest that the poison which is causative in a malignant scarlet fever, or smallpox, or yellow fever, and show what relations are in the blood poison affecting the nervous centers, even to the extent of profound nervous exhaustion, heart failure, dyspnœa, irregular respiration, insomnia or somnolence, with delirium or coma, and vitiated and arrested secretion, and finally death. What do these symptoms indicate? Loss of nervous control in the higher centers, and all secondary one, viz., inordinate and unrestrained or incoordinate action of all central and peripheral action; hence, there is loss of function, incompetent blood supply, and it is also poisoned by a deep and widespread failure of elimination of dead and dying hyper-catabolism tissue; hence, function draws to a close in death.

This picture requires great skill and broad comprehension in the selection of remedies, and if not carefully done produces coincident action of remedy with disease, and hastens the final issue. We have already indicated that high temperature may be composed of two factors—heat production and heat loss, relatively. In this picture just drawn the thermo-genetic center has been overcome by poison, and hence fails, hence our main reliance then is heat abstraction, as the antipyretic remedies may depress the heat centers still more. But heat abstraction may also, unless very carefully done, depress the vital force remaining and produce the same result. Here we may mention cold or tepid sponging, ice (internal or external), cold shower bath or pack, provided it be considered justifiable. Again, in the use of remedies, as antifebrine, thalline and antipyrine, we find, as a matter of experience, that they have the power to depress thermogenesis; they have also the power to depress other functions which are quite as much or more important to life, viz., cardiac and respiratory action, and these being related to all other functions depending upon blood supply, hence the action of remedies must be closely scrutinized, because their action is not confined to the heat centers, but also affects the centers of organic life, viz., organic centers, or those of the "sympathetic nervous system," and which affects the heart and respiration more profoundly than some others. To reach a summary on the question of antipyretic remedies, we have as yet no absolutely reliable drug which in its main action depresses or controls production of heat that does not also seriously at times affect other functions and organs. In large doses these drugs are not to be given, and among those mentioned in this regard antipyrine is the most risky (I do not say dangerous), and yet is a valuable remedy for pain of nervous origin, headaches, neuralgias, muscular rheumatism, etc.

SUMMARY IN PROPOSITIONS.

First—We present first the relation of nerve and nervous centers to muscle as the basis of antipyretic treatment, by which

we show the power of agents to produce effects upon nervous centers which shall control heat production and heat abstraction; blood supply, increase or diminish; heart pressure, modify, inhibit or control muscular action, as seen in spasms, convulsions, epilepsy, puerperal convulsions, poisoning by strychnia, oposthotonos (its marked result), tetanus, etc.

Second—The induction of the rythmical action of muscular fiber in blood vessels, in heart and arteries; the peristaltic action of the intestinal tract; the periodical law of labor in the impregnated womb; the contraction and dilatation of blood vessels and other tubular structures; the control of heat centers, which modify or control all the functions here mentioned, are all found to be under the control of the sympathetic nervous system. While it is co-ordinate with the cerebro spinal nervous system, yet its power is peculiarly exerted upon the inorganic muscular fiber, hence, by a stimulation on one hand, or a paresis of power on the other, by a selected remedy we get all the variable conditions of the circulation, thus controlling and modifying all the functions of the body.

Third—"It has recently been maintained by Bilharz and Keener that nerves pass by continuity into the muscular substance, and Pflueger has found also that the nerves to glands penetrate the walls of cells and end in the nuclei of the same." The ganglionic cell in the lowest order of animals which have nervous power is found in cells and fibers performing organic processes or functions, examples of whieh are in the heart and intestinal walls, and which produce rythmical action.

Fourth—Section of nerve causes dilatation of vessels, as it corresponds to paresis of the same (loss of power). Paresis of power is the same thing when exerted upon the circulation, or through a nerve center upon the heart, as section of nerve induces upon any given area supplied by it; hence, stimulation of nerve centers and paresis of centers are the two opposite poles of the battery, viz., the brain and sympathetic system, which produce dilatation and contraction of vessels.

Fifth—Division of the cervical sympathetic on one side causes dilatation ot arteries on same side. (Brown-Sequard.)

Sixth—Division of the fibers of the great sphlanchnic nerve produces a dilatation of blood vessels of the abdominal viscera.

Seventh—Vaso motor nerves contain sympathetic nerve fibers, hence, if divided, produce dilatation of vessels (curare or urari paralysis)—nerve endings in muscle—hence used in tetanus.

Eighth—Atropine paralyses inhibitory fibers of the pneumogestrics, and thus inhibits or paralyzes the heart and blood vessels controlled thereby.

Ninth—Muscarin, or jaborandi, paralyzes the heart and stops its action through the vagus. Nicotine slows the heart till inhibition is complete, hence nicotine and urari exert similar effect upon nerve endings, viz., paresis. These are not antagonists. I have seen a case of paresis of vocal cords from tobacco, and heart failure from antipyrine in degree.

Tenth—"Digetalis, said to be heart tonic and veratrum; both slow the heart and diminish frequency, and this fact is in harmony with the law of Marrey, viz., that the rate of the beat is in inverse ratio to the arterial pressure;" rise of pressure being followed by a diminution of pulse rate, and fall of pressure with increase of pulse rate.

Conclusion—Hence, nervous and vascular sedatives diminish heart and pulse rate and produce rise of pressure in blood vessels; hence stimulants, as brandy, whisky, carbonate or muriate of ammonia, quinia, capsicum and many others of the class, as digitalis, caffeine and strophanthus, are antagonistic to antipyretics in common, and also to digitalis, veratrum, gelsemium, creosote or carbolic acid; hence, beware of the antagonistic action of remedies given at the same time, which often are made to coincide with the disease, and symptoms are induced which are the result of imperfect knowledge of the vital forces of the body, and also imperfect knowledge of the relations which one drug bears to another in results. The conclusion is final that the medical man who comes to the bedside should be of the

highest type, in knowledge and preparation, as he deals with double-edged tools and upon him is laid the responsibility of human lives.

I submit that here is outlined and briefly expressed some of the deeper facts of our science in anatomy, pathology and therapeutics, which form the foundation stones of practical medicine.

SECTION ON SURGERY.

THE STATUS OF SURGERY TODAY.

BY C. H. WILKINSON, M. D.,

GALVESTON, TEXAS.

Gentlemen of the Texas State Medical Association: At your session held in Waco in 1891 you conferred upon me the honor of selecting and presenting to you for the present meeting the recent advancements in and present status of the art and science of surgery. While I appreciate and thank you for the distinction conferred, I feel the inadequacy on my part of doing justice to yourselves and to the subject assigned me, and it is, therefore, with no small degree of hesitancy that I offer this brief resume of what has transpired in the surgical world since your last convocation. Conceiving it to be my province, however, only to detail such facts as might be limited by the twelve months just preceding, and confined to this specific period of time, I make haste to state that such a task would be an irksome one to accomplish successfully, and, if accomplished at all, so short and meager would it be that, without some charm of eloquence being attached, no report confined to the limits of an even year would be of interest to you as a scientific paper. I trust to be excused, if in the rendition of my subject I wander back a number of years into the decade just gone by, since matters of interest to us as physicians, which I propose to speak of in this paper today, require more time for their evolution than is accorded in the brief space of a twelve months' period of time.

To place my subject in a practical shape, and to bring it at once squarely to your observation without further preliminary,

I propose to consider it in the manner of the following interrogatory: Has the art and science of surgery advanced at all since our last report, and, if so, to what extent? Here at the very threshold I am confronted with the problem: What was the status of surgery at that period? To what limit had the art extended? To what degree of elevation had the science risen? The questions to be answered are so broad, and the territory to be covered so extensive, that were we to give range to a paper embodying all the details, subject to elucidation under the heading allotted to me, your time would be taxed and your patience would be exhausted. I therefore have determined to confine myself to the three greatest subjects now before the eyes of the profession, and, if time allows, to call your attention to a few miscellaneous topics which today are claiming the earnest consideration of surgeons throughout the world.

In 1890 the art of surgery stood well nigh perfect. In the language of an illustrious fellow, it had far surpassed the science. The hand of man had invaded nearly if not every territory of the human body. Under the inspiring wand of Lister, the back, the bowel and the brain, the three most vulnerable regions of the body subject to the attention of the surgeon, had all been explored with impunity, and trophies had been borne away from each locality that served only to excite and stimulate surgeons to delve the deeper into those hitherto considered most dangerous regions of the human body. In 1890 the world was beginning to realize the wonderful discovery of Brocca in establishing the principle of "cerebral localization."

It is true that Dupuytren, nearly one hundred years ago, had incised the dura mater and opened the brain to evacuate an abscess, but then the grand discovery of Brocca was unknown, and up to 1871 the establishment of his principle had never been accepted. Since then the dangerous work of developing his discovery has been going on by surgeons, until at last, and only today, are we such masters of the art as to be able to state with positiveness and precision when to cut, how to cut and where to cut for cortical lesions of the brain. By "cerebral localiza-

tion" we are now able to state with an almost certainty where cerebral disorders exist, through the movements of the exterior muscles when in an unnatural state of rest or motion, as in spasm and paralysis. This ability to read the condition of the brain, and to be able to locate the exact spot of severe diseases or injury, by noting the unnatural actions of the muscles, is "cerebral localization," and is claimed by Brocca as his own discovery.

It would consume a volume to describe the wonderful and daring encroachments that have been made upon this portion of the body, and to tell you of the brilliant victories that art and science have won in this domain in the past few years. Only a few of these great operations can be alluded to at present in order to illustrate the advancements made in brain surgery during this time.

Thus Ball reports the case of a man whose skull was penetrated by the blade of a knife, with aphasic symptoms following. He trepanned the skull over the fissure of Sylvius, turned out a blood clot, and his patient speedily recovered.

Davies Colly had a case delirious from a fall of fifty feet upon his head. Paralysis of left arm first followed; then a more general paralysis occurred. He trepanned in front of the right fissure of Rolando, and turned out a large clot of blood, and his patient speedily recovered.

Stoker reports the case of a man fifty years old who received a blow over the right fissure of Rolando, followed by paralysis of the left arm and stupor. An operation being postponed, he grew worse and became moribund. On the ninth day the skull was trepanned and a large clot was removed from near that fissure. On the same evening all brain symptoms had disappeared, and the patient made a speedy recovery.

Croft treated a female aged 26 who was struck near the left parietal emenence, followed by right hemiplegia and coma. She was trepanned over the seat of the injury, a large clot was removed, and she recovered.

Walker trepanned a man 35 years of age for skull injury of uncertain origin. Patient was comatose and had partial left hemiplegia. Cerebral localization was mapped out and two disks of bone removed therefrom, when a blood clot weighing four ounces was removed, and consciousness was restored. Patient recovered and stated that he had fallen off a scaffold ten feet high, alighting on his head, insensibility following later.

Macewen operated several times for cerebral hemorrhage, locating the situation of the clots through motor symptoms. He removed them after the method alluded to, and his cases all made speedy recoveries.

Harrison, Swain, Brenner and others report cases of cerebral hemorrhage in which they were able to locate the clots by inferences drawn through the motor symptoms, and in which speedy recovery followed removal.

In all these cases strict antiseptic precautions were observed. Bichloride washes were used for irrigation of the cavities, and drainage employed in nearly every instance with horse hairs.

The removal of tumors and bone spiculas from the substance of the brain, through the agency of cerebral localization has been attended by even more brilliant results (if such were possible) than those following operations for blood clots.

Keen reports the successful removal of a large fibroma from the brain of a young man aged 23 years, who, when 5 or 6 years old, received an injury to the brain, followed by epilepsy. Severe neuralgias and paralysis of the right arm, leg and same side of face followed, in the order named. Careful preparations were observed, and an opening two and a half by three inches made through the skull. The tumor, weighing over three ounces, was easily removed, and the patient went home on the eighty-fourth day following, completely restored to health.

Weir operated on a man 39 years old, who, during an attack of malaria, had a great deal of pain in the head, soon followed by spasms of the right cheek. A year or two later he had epileptic seizures, with twitching of the right arm, leg and

cheek. The facial muscles on the right side became paretic, with slight deviation of tongue to the right side, and the right arm became paretic. The case was diagnosed right-sided Jacksonian epilepsy with facio-brachial paresis. A button of bone was removed from the skull one and a half inches above and a little in front of the left ear. A small tumor an inch long was removed and proved to be sarcoma. The bleeding was checked by tampons of iodoform gauze, and the bone disk reimplanted. Epileptic seizures ceased in six months, and the case was reported later as being greatly improved.

One of the most brilliant operations for brain injury, and of quite recent date, was that performed by Ernest Laplace, reported November 2, 1891. While not illustrative of "cerebral localization" like the foregoing, it is particularly scientific, from the fact that so far there has never been a case reported where trephining was done so low in the temporal region for the removal of clots from the base of the brain. The patient, aged 10 years, while playing on the lawn, fell on a broken fencing-foil. The steel penetrated the left orbit between the inferior orbital ridge and the eye-ball. The child was found a few minutes later in an unconscious condition with the instrument still in the wound. It was removed by a servant, and the child was placed in bed. The case was seen by Dr. L. five hours later, and upon examination the eye-ball proper seemed to be uninjured. There was coma, right hemiplegia, left facial paralysis and aphonia. The respiration was 30, pulse 140 and temperature 104½°. There was also complete anæsthesia of the eye, while the pupil was dilated and insensible to light. Treatment by venesection, strychnine, etc., having proved of no avail, trephining was resorted to thirteen days afterwards. The operation consisted in removing a three-quarter inch segment just above the zygomatic arch. To reach the center of the brain to remove the suspected clot, a miniature egg-beater, consisting of four loops of platinum wire, had been improvised. This was insinuated between the dura-mater and the skull without wounding the cerebral structure, and by turning this upon

its axis the clot, over a teaspoonful, was removed. The patient reacted well from the operation, consciousness gradually returned, movement was performed and speech was resumed. Six months after the operation the patient had equal use of both inferior extremities. The continued improvement warrants the hope of ultimate and complete recovery. Many other cases of trepanning the skull for tumors, abscesses and clots through the guidance of cerebral localization might be enumerated, but enough have been alluded to in order to illustrate the status of surgery today upon this particular topic. I will therefore close this portion of my subject with a brief resume of surgery for the relief of idiopathic epilepsy.

The efficacy of the foregoing procedures has been shown beyond a doubt. A grand triumph in this department of surgery has been accomplished, and the day has dawned when relief is assured to those most unfortunate of human sufferers—the victims of tumors and abscesses of the brain.

For the relief of epilepsy, the result of some gross and tangible lesion, it has been seen that brilliant results and wonderful cures have followed the removal of the cause. But where the cause is neither palpable nor easily reached, as in purely idiopathic epilepsy, a dark field has been entered by surgeons, which as yet has not brought to light a single triumph that might be considered lasting. Von Bergmann, in his "Surgery of the Brain," warned against the indiscriminate operation for this unfortunate trouble, and lays down as a rule that no operation should be undertaken for epilepsy unless the surgeon has good reason for expecting a palpable and removable cortical lesion. Yet in spite of this remonstrance today the surgeons of the world are as busy as the smiths in Vulcan's workshop, planning, forging and delving into the very bowels of the brain in search of a removable cause for this unfortunate and intractable malady.

While work is going on in silence and sincerity by our indefatigable brothers, both in our own State and abroad, let us glance a moment at last year's record, as given to the world,

and note the standing of our art upon this portion of our subject. Since our last report craniectomy (as the operation is now called) has been performed for epilepsy, with the following result: In May, 1890, by Bartlett, for epilepsy, associated with hemiplegia and imbecility, in a case aged six years; result, recovery from operation; report made ten days later. In April, 1891, Angier operated for epilepsy, with imbecility and microcephalus, in a case aged eight years; result, improvement. In April, 1891, Maunoury, for epilepsy, microcephalus and imbecility, child two years old; death from shock. In April, 1891, by same, case of epilepsy, aged four years; improved for three months, then all symptoms returned. In 1891, by Heartaux, case five and one-half months old; died five weeks later from exhaustion. In June, 1891, by Keen, case four and one-half years; result, no marked improvement. In June, 1891, Gerster & Sachs, case four and one-half years; death in three hours. In September, 1891, Horsley operated in a case, aged seven years, for microcephalus, imbecility and epilepsy; child died on second day. In September, 1891, Hammond operated in two cases, one of which, aged three years, lived; the other died in fifty days. In November, 1891, Fisher reports a case of epilepsy and insanity for trauma, on whom he operated with the effect of lessening the fits at first; later the disease returned. McBurney & Starr report cases, in which one was much improved. Hadra, of Galveston, in the last few years, operated on five patients for idiopathic epilepsy, after various methods, but his results not being as satisfactory as he desired, he then used "galvanism of the cortex." After trepanning with most gratifying results in two cases on which he operated in February last, and in which I assisted, his galvanic treatment up to date, April 20, has had the effect of controlling the convulsions.

The achievements in this particular division of brain surgery do not stand out in such bold relief as do those for abscesses, clots and bone depressions, and it would appear that Bergmann's warning was oracular when he insisted that no operation for epilepsy should be undertaken unless the surgeon felt

certain of being able to remove some palpable cortical lesion. In opposition to this opinion, however, I will cite the conclusions of Allan Starr, of New York, upon this subject: "Epileptic attacks are frequently reduced in frequency and modified in character by craniotomy. When the opening in the skull remains covered only by the soft parts, it appeared to act as a safety valve, allowing changes in the intro-cranial cavities to occur without producing pressure upon the brain." It is too early, however, to decide the value of craniotomy in cases of idiopathic epilepsy, as the process is a new one and requires more time for its evolution. So, I will dismiss this portion of my paper, and proceed to call your attention to the surgery of the

SPINE.

In this department also, surgery can claim some victories, which, if not as numerous and brilliant as those for lesions of the brain, are nevertheless important, since bifida, tuberculosis, neoplasm and traumatism of the spine are none the less serious than the cerebral injuries alluded to, for which surgical interference is often demanded.

For bifida—that unfortunate accident of uterine life and development—the choice of the profession today appears to be the plan of injecting the sack for the purpose of occluding its walls. A solution of iodine and glycerine is deposited into the cavity of the sack, care being taken that no spinal fluid shall escape. The patient is held quietly on its side for an hour or two afterwards, in order to avoid leakage, and the process is to be repeated every ten days thereafter until a cure is effected. Sinclare, Robson, Evans, Hund and others have reported successful cases of excision of the sack, but Bayer rejects all former procedures and operates upon such cases as he would upon a chronic hernia. In a case he reports recently, his patient, a child ten days old, was chloroformed, and skin flaps laid aside from the meningocele, which was as large as an orange, down to the pedicle. The sack was laid wide open, the cauda properly replaced in its cavity, and all the bulging mem-

branes excised. The marrow was covered by tacking the edges of the dura together, then the muscles and skin were sewed over, and the child made a complete recovery. Bayer suggests that eventually a bony covering can be secured for this disease by carefully dissecting periosteal coverings over the rent in the spine. More likely bone transplantation in such cases might succeed.

For tuberculous disease of the spine the indications for a surgical operation are the evacuation of pus, the removal of dead bone, and the relief of the cord from the pressure of inflammatory products. A great many successful operations could be recorded in this department of surgery, and it is not anticipating too much to say in all confidence, that the day is not far distant when the vast majority of tuberculous spines will be relieved, or greatly improved, by surgical interference.

For tuberculosis in the lumbar region the operation of Treves as modified by Delorme is the one now adopted. Cut through the fibres of the quadratus lumborum muscle on a level with the spinous processes, and then follow up the channel with the finger close to the spine until the diseased bone is reached; then curette away all dead osseous tissue and drain. So successful have been the efforts of Treves, Fraenkel, Delorme and others in this operation that surgeons have been tempted to invade the cavity of the dorsal spine for the removal of dead bone in this locality. Thus Boeckel removed a portion of the third rib and curetted the lateral aspects of the second and third dorsal vertebræ. Greenbaum did the same operation on the tenth dorsal vertebra.

For pressure upon the cord in Potts' disease, producing paralysis, scores of operations have been performed during the past few years, many of them being attended by the most gratifying results; a description of one of which will suffice for all the balance. Gerster reports a case (July, 1890) of a boy fifteen years of age with paraplegia from Potts' disease. The laminæ of the sixth and seventh dorsal vertabræ were raised and an extensive abscess evacuated. Caseous masses were found en-

circling the roots of the spinal nerves, as well as the transverse processes of the sixth, seventh and eighth dorsal vertebræ, while the same processes of the fifth, sixth and seventh dorsal were carious. All these diseased parts were raised, and the bodies of the sixth and seventh vertebræ curetted. Seven months later the patient was completely cured.

So far forty cases of this operation for Potts' disease have been reported, in which twenty-two were either complete cures or else resulted in improvement. There were twelve deaths, or a mortality of thirty per cent., and among these were one from anæsthesia, two from shock and the balance from the general gravity of the disease. But it must not be inferred that the method of suspension in these cases is falling into disfavor. On the contrary, Prof. White, of Philadelphia, enjoins that the effects of suspension in such cases has been so favorable in a number of cases that it should occupy a prominent position in the consideration of our therapeutic resources, and should be always tried, or at least carefully discussed before operative measures are thought of. Prof. White draws the following conclusions upon this disorder: 1. The paralysis in Potts' disease is not due, as a rule, to a myelitis, but to an extra dural, connective tissue tumor. 2. Generally a favorable prognosis can be given in cases of children when pus, if it exists, can be evacuated, or when the extension plan can be employed. 3. Failing to relieve paralysis after trying the above procedures, resection of the laminæ becomes entirely justifiable.

Passing now to the third group of cases, where an operative procedure is often called for, namely for neoplasms, we will briefly review the status of surgery today upon this subject.

The operations performed of recent date for the removal of tumors of the spinal cord are some of the most brilliant and remarkable in surgery. This is mainly due to the great difficulty often experienced in locating such growths, as well as to the prompt and wonderful relief attending their removal. Thus Horsley, a few years ago trepanned the laminæ of the fifth vertebra, having first cut off the fourth, fifth and sixth dorsal spines.

After removing the trephine button, the rest of the luminæ of the fourth, fifth and sixth vertebræ were taken out by means of the bone forceps and knife. The dura was opened, but nothing abnormal was found. The third and seventh laminæ were then removed, and finally the laminæ of the second dorsal vertebra, disclosing an almond-shaped tumor, which proved to be a fibromyxoma. This was easily taken away, and the patient made a rapid and excellent recovery.

But it is not necessary to multiply illustrations of this operation; scores of such could be recalled were it necessary. This single instance, therefore, will suffice to show the technique of the procedure and the status of our art upon the subject at the present day. Not only tumors of diversified character have been taken out of the spinal canal by removal of the luminæ, but our literature contains many instances where the spinal nerves have been divided close to their origin for the relief of violent and persistent neuralgia.

Finally, for fracture of the spine, one of the most formidable injuries at times that can befall humanity, surgery stands ready to lend a willing and a valuable hand. For a long time so great was the risk attending any surgical interference in this class of affections, that all operative procedure was condemned as unjustifiable, for fear of augmenting the already dreadful condition of the patient. Even up to 1884 we find in the tenth volume of the "International Encyclopedia of Surgery" Prof. Eves' statement that the operation of resection of dorsal vertebræ is one of the most difficult in surgery, if not impracticable; and also Dr. John Lidell's conclusion that "the operation of resection or trephining the vertebræ is unjustifiable." In spite of this protest, however, surgeons have gone right on operating for fracture of the spinal column until, at last, it may be justly styled an established operation in surgery.

Golding Bird in May, and Knox in June, 1891, report cases of removal of the luminæ of the dorsal vertebræ for displaced bone, in which their patients made speedy and excellent recoveries. Before the advent of antisepsis, and up to the present

date (1892), this operation for fractured spine offered the following statistics: Cases treated, on record eighty, with thirty-three recoveries and forty-seven deaths, or a mortality of fifty-eight per cent. Excluding all cases from above table operated on before the use of antiseptics, we have thirty-six operations, of which six were complete recoveries, five were cases of improvement, eleven recovered from the operation without any improvement and fourteen died, a mortality of thirty-nine per cent. Surely we see in these figures the steady advance of surgery in the past few years, and cause for the highest anticipations of most gratifying results in the future.

Leaving the brain and the spine with this rapid glance at its surgery of today, we will now proceed to review some of the advances made in the department of abdominal surgery. And right here let us pause a moment to do homage to the intellect that paved the way to successful laparotomy, that robbed the most formidable operation known to the then surgical world of most of its dreads and dangers. To Marion Sims are we justly indebted for nearly all that is known of uterine surgery. But not alone in uterine surgery did his masterly and daring genius shine out—he demonstrated the more important principle that to lay open the abdomen, remove or replace defective organs and repair injuries of the intestines was not, when skilfully performed, that terrible undertaking we had been taught to believe in prior to his time. Before his exposition of this subject only the most hazardous adventurers dared to penetrate this almost unknown surgical field; today everybody operates upon the contents of the abdomen.

Following in the footprints of Sims, protected by the talisman of Lister and encouraged by the shouts of Tait, the whole world today seems moving down upon the abdomen; men skilled and unskilled in the use of the knife; the patriarch with trembling hand, as well as the tyro in his professional swaddling clothes, all alike are rushing on into this territory. Laparotomy today is no longer a novelty; its performance, as well as its results, are too well known to the entire profession to

require a notice here. I will therefore only pause a moment to describe one of its most beautiful and important outgrowths.

Since our last report on surgery the very delicate and unique, but most salutary method of uniting lacerated portions of the intestines, known as "lateral anastamosis," has come prominently and most satisfactorily before the profession. In this process diseased or lacerated parts of an intestine are cut away, sometimes to the extent of many inches, and the severed extremities of the intestine laid side by side. Retained in this position by appropriate sutures, a slit is made of suitable size from the interior of one intestine to another. In order to retain these slit-like openings side by side, various articles, such as bone plates, compressed catgut, rawhide and even potato discs, have been suggested for the purpose, though the bone plates of Senn seem to have the greatest popularity. The plates, also cut and shaped to suit the slits, are ingenuously sewed to their appropriate apertures and then stitched together. The open ends of each intestine are now invaginated and stitches taken through their serous surfaces, thus insuring against fecal escape, and the operation is complete. Of course, every antiseptic precaution is taken in this operation, a condensed description of which I have been forced to give. We are indebted to Senn, one of our greatest abdominal surgeons, for the developments made in this particular direction, as it is to his improvements mainly that "intestinal anastamosis" has become a recognized as well as a regular surgical operation. By his method it requires from fifteen to twenty-five minutes, according to dexterity, to perform this life-restoring procedure. Dr. McGraw, before the surgical section of the American Medical Association last year, introduced his plan of fastening diseased, especially constricted, intestines together by the elastic band method, his bands slowly cutting their way through the tissues, leaving an opening behind them for the passage of alimentary substances, and requiring in its performance the brief space of ten to twenty minutes. Under the heading of intestinal anastamosis many brilliant operations were executed in the last few years. Upon the

stomach alone hundreds of such operations have been performed, and many of them have proven eminently successful. Besides the procedure just alluded to, operative treatment for stenosis and malignant growths has grown to be quite frequent. Billroth's statistics for the past ten years are alluded to in this connection in order to point out where we stand upon this formidable question. Thus, in his clinic alone there have been in this time one hundred and twenty-four resections of the stomach and intestines made. There were forty-one cases of pyloric stenosis, twenty-eight of which were for cancer. Of these, nineteen cases recovered and twenty-two died. Not only in Billroth's clinic do we find these giant operations going on, but all over the world are gastro-interostomies, pylorectomies, enterostomies, etc., being performed.

One of the latest novelties in this department of surgery is laparotomy for intestinal perforation in typhoid fever. Van Hook, last year, reported three cases of this invariably fatal accident, in which the abdomen was opened and the rent in the intestines sewed up. His first case had a perforation to occur during a relapse. The temperature ran up to 106 and the pulse to 132. The abdomen was opened and over a pint of fluid feces was removed. A minute circular opening was found and fecal matter was freely circulated among the intestines. The opening was closed by means of Lambert's suture, the peritoneal cavity cleaned out with warm sterilized water, and the remainder of the abdominal wound closed. Great distension followed this operation, which yielded to enemas of epsom salts, and the patient recovered. Up to the present writing I have been able to hear of only nineteen cases where a laparotomy was made for typhoid perforation; of these only four recovered. Nearly all the openings were in the ileum; hence this part of the bowels should be first searched for in this condition. To quote Van Hook's conclusions: 1. There is no rational treatment for perforation in the course of typhoid fever except laparotomy. 2. The indication for this operation, therefore, when perforation does occur, is imperative. 3. The only

contra indication to this operation is a moribund condition of the patient. 4. The published statistics for this operation are strongly in favor of its performance.

APPENDICITIS.

Whether this condition is growing in frequency, or because surgeons are paying more attention to the disease, is an unsettled question; but the fact is, nevertheless, apparent that reports of such cases are becoming more frequently noticed in our journals every day, and no report on surgery would be complete without some allusion at least being made to the subject. That operative interference in this condition is too often resorted to would also appear apparent. At a recent meeting of the Philadelphia Medical Society this very question was brought up for discussion, and ably handled by several of the members present.

Dr. Pepper defended the medical side of the question, and urged moderation in the operative treatment. "If every case of appendicitis were operated on," said he, "the mortality would be tenfold what it is now. As a general rule these cases recover under medical treatment, and remain so permanently."

Mr. Bryant, the famous English surgeon, was present and agreed with Dr. Pepper, and remarked that delay in operation was the wisest course to pursue in the majority of instances. Judging from the cases I have encountered in my practice, the views of Mr. Bryant are eminently correct, for although suppuration had commenced in one, this case recovered; a fistulous opening in the iliac region affording a vent for the pus. In every other patient I saw a prompt and lasting cure follow local antiphlogistic applications to the inflamed region, with opium internally. In operating Mr. Bryant prefers a more posterior opening than through the right semiluna line, believing that the cecum can be more easily reached and drainage be better secured by such a route.

In the foregoing discussion Drs. Keen and Price emphasized the importance of having a surgeon associated with every case

of appendicitis, in the event that surgical interference became necessary; in my opinion a very salutary suggestion.

In operating for obstruction of the bowels life often depends upon a proper diagnosis and correctly applied surgical treatment. According to Dr. Joseph Price, of Philadelphia, perhaps our greatest American laparotomist, we should always precede our operative measures by washing out the stomach of the patient. "If you fail to do this," says he, "you leave your patient in the condition of a half finished operation, and the part left undone will finish your patient." He also urges "that in strangulated hernia an incision should always be made into the abdomen through a median opening. The seat of obstruction and the location of the hernia can be examined through a two-inch incision. Until the point of strangulation is found and relieved, you can never feel safe that your patient is out of danger. There is no better way of ascertaining where an obstruction exists than through a median incision, with both sides of the constriction being within easy reach for examination."

"For gaseous distension, a frequent consequence of injuries to the bowels, do not puncture through the abdomen," says Dr. Price, "nor should you use a hypodermic needle for such purpose, but cut down upon the bowel with a knife and let out the gas, and close the wound in the intestines with Lambert sutures." This great surgeon favors rapid interference in all well marked cases of obstruction of the bowels. "No half dozen consultations," says he, "no opium and belladonna administrations previous to the work. These delays make the difference between life and death. Relieve such conditions early. The surgeon can do no harm, nor add one feather weight to the already dangerous condition, but with good work will save hundreds of valuable lives."

This advice, coming from a man who has in the past ten months performed no less than two hundred and eighteen abdominal sections, with the phenominal record of only two per cent mortality, and who is justly styled the Lawson Tait of

America, cannot fail to be appreciated by, and valuable to the profession in the United States, and is a fitting close to this portion of my paper.

CANCER.

There is perhaps no subject before the medical world today of more interest and importance to the profession at large than that of cancer. Not alone is its consideration a vital question to the surgeon, but to the physician and gynæcologist also it is one that claims their keenest attention.

It is interesting on account of its absolute obscurity of nature, its rapid and alarming frequency of occurrence and its obstinacy to treatment when once diffused throughout the system. It is one of the few surgical affections that up to date has not as yet been mastered by the science of surgery. To art alone in this great fell destroyer have we been forced to resort for what few victories we have won over its destructive ravages. The cause of cancer is, so far as I can glean from medical literature, as yet unknown. Theories of its etiology, one after another, have from time to time been heralded to the world, only in turn to be disproved. The beautiful view of Conheim ascribing its cause to "dormant embryonic cells brought into activity by some local irritant," has perhaps enjoyed a more popular existance than any yet advanced. The doctrine of "altered physiological resistance," as well as Russel's theory of "a certain characteristic organism," have with the former been either disproved or seriously called into question. Several workers are now endeavoring to prove the bacterial origin of cancer, but so far such views have entirely failed to materialize. Prof. Adam Kieswiczy, of Cracow, claims to have discovered a "poison inimicable to cancer," and has gone to Vienna to demonstrate before the academy his new method of treating this disease. The future alone can tell whether the interesting experiments of the Cracow professor will be followed by practical results, and in the meanwhile no one can blame us for being skeptical.

Prof. Gibbs, of the University of Michigan, believes, and I believe with him, that there is an inherited cancerous tendency

in some of the cells of the body in certain individuals, which may be brought into activity by injury or prolonged irritation, or by an organ passing into senile debility. Be the cause what it may, however, the melancholy fact stares us in the face that cancer, a hundred years ago so rare, is now so frequent, according to responsible authority, that it causes nearly half as many deaths in the United States in one year as do accidents and injuries together.

Billings has shown that in 1880 fourteen thousand persons perished from that cause alone in this country. Nor is this mortality its worst feature. Statistics prove that cancer is increasing steadily every year at about the rate of two per cent per annum. Thus, in England, during the year 1861 three hundred and sixty deaths from cancer occurred in every million inhabitants, while in 1887 the proportion had risen to 606. Likewise in Wales has a large increase been noted.

In New York in 1875 the mortality from cancer was 400 to the million inhabitants, while in 1885 it rose to 530. A disease of such uncertain nature, and of such certain spread can hardly fail to be of extraordinary interest to the entire profession; hence my excuse for bringing it before your attention on this occasion. To cope with this formidable monster, however, is the practical province of the surgeon.

Recognizing the fact, no matter on what theory it is founded, that cancer at some state of its development is purely a local disease, the path of procedure lays plainly open before us. Removal of the growth is the only remedy at our command upon which we can place reliance. Remove *early* and *thoroughly*, is a maxim which applies to no other morbid process with more vehemence than to cancer.

Trust not to such delusions as antidotal injections. Beware of all such fads as pyoctannin, bi-chloride of mercury and other remedies, as they only serve to delay operative measures, and permit thereby the general system to become infected. As a rule, caustic applications possess no special merit. True, superficial growths can be easily removed through this agency,

but a cleaner, a more thorough and a far less painful excision can be made with the knife than with the paste. The knife, then, is our only reliable weapon in this disease, and it is the duty of the surgeon to use it promptly. Without it, as a rule, a sure and speedy death awaits the victim. Through the aid afforded by the microscope, and a further knowledge that sixty-four per cent of all neoplasms are malignant, with the known fatality of the disease, if left alone, and the certain value of early and thorough operative interference, it seems to me the duty of the surgeon could never be mistaken. With the improved methods of operating at hand, with advanced anæsthetic measures and the aid of modern antisepsis, there is no excuse for dallying with our cases and killing time by such compromising, worthless agencies as internal or external medicinal remedies. Even though it be a non-malignant growth, in case of doubt, if at all removable, such doubt should be removed by cutting it away.

The foregoing remarks are especially applicable to cancer of the breast. Such cases are perhaps the oftenest met in surgery. They all die if left to fate, or tincture of iodine, which is too often the case. They nearly all survive, for many years at least, if operated on early.

The procedure is one of the safest in surgery when we consider the amount of tissue excised. Prof. White, of Philadelphia, whose experience includes many hundreds of such cases, never saw a patient die from such an operation. Fink, in his series of 194 cases, lost only three and one-third per cent, and so with other operators.

For uterine cancer, we have in early and skillful hysterectomy an almost certain cure for this disease. This assertion, however, applies to cases where the cancer has not gone beyond the part to be removed. Prof. Goodell compared the statistics of this operation favorably with that of ablation of the breast, and closes a highly interesting and instructive article in the Therapeutic Gazette for December, 1891, with the following words: "I do not hesitate to say that in vaginal hysterectomy

we have a most potent weapon against a most deadly disease."

Butler has collected the statistics of 1357 cases of cancer of every description in which, after operation, there were alive at the end of three years 312 of the cases. As the operation was performed for cancer in all its stages, and as many must have died within that time from intercurrent troubles, it argues favorably for the operation, since nearly all of these cases must have died before that time had they been trusted to the medicinal power of nature.

Passing now from the great fields and topics which have been absorbing the attention of surgeons for the past few years, I will proceed to, and conclude this paper with a cursory detail of a few miscellaneous subjects, which, though lesser in the scale of magnitude, are none the less important than the matters we have had under consideration in the first part of this paper.

Hemorrhage, and the best methods to control it, have always been questions of lively import to the medical profession. Like cancer, just considered, hemorrhage is a topic which possesses interest to every class of practitioners. Recently, in fact in the past two years, an impetus has been given to this subject which is destined to revolutionize the old and established methods of dealing with it. The day of "venous transfusion" may be said to have passed, and such term as "defibrinized blood" has been dropped from the surgeon's vocabulary. Safer, speedier and far more practical methods are now at our command to meet the emergency of profuse and exhausting hemorrhage. The Lancet for September, 1891, contains some valuable remarks by Dr. Benjamin Ward Richardson upon the subject of saline transfusion in serious hemorrhage. Dr. Richardson has discovered, through experiment upon the lower animals, that resuscitation was often produced by injecting warm saline solutions into the blood vessels of those animals, and he establishes the fact, that it is the saline current driving the stagnant corpuscles along the channels of the blood vessels that awakens life in such cases. It is not so much blood you require replaced in the veins, as a suitable menstrum for what remains in them.

In collapse from cholera and hemorrhage, Dr. Richardson advises a mixture of ten ounces of blood in a pint of saline water to be thrown into the patient's veins, while in chloroform narcosis the saline water should be used.

Dr. R. Dawbarn, of the New York Polyclinic, in the January, 1892, Record, gives the technique of a method he employed in a desperate case of hemorrhage, which appears to be the simplest and most effective procedure for this alarming condition that has as yet been tried by the profession. He was called to treat a patient with post partum hemorrhage, and I will follow with his own description: "When I saw her she looked moribund; nothing at first glance showed life save irregular gasping for breath and the occasional delirious mutter. She was too weak to show restlessness. The features were pinched, the pupils dilated and the eyes glazed. There was no pulse at the wrist, though a faint beating of the heart could be heard. As quickly as possible the 'normal salt solution' (a teaspoonful of salt to a quart of water) was prepared, as hot as the hand could tolerate. The hypodermic needle was inserted into the right femoral artery, just below pourparts ligament; a catheter was attached to the needle at one end and a Davidson syringe to the catheter. A full half pint of this saline water was thrown into the artery, requiring half an hour to do so. Before this injection was half over we were delighted to see improvement in the heart's action. Later on this injection was repeated, and in a few hours afterward the patient was considered out of danger."

This is a new and most practical method (although saline injections have been used in some shape or other for years past), but this surpasses in safety and simplicity all other methods ever employed for the treatment of hemorrhagic collapse. In such conditions the danger to the artery need be no barrier to the operation; an aseptic needle properly handled will cause no more injury to the coats of the blood vessel than it does to the integument after ordinary use. The great warmth of the solution used is a point in its favor, since heat stimulates the nervous centers and aids in bringing on reaction.

Taken all in all, the plan of Dr. Dawbarn seems to be, as plausible as it is, certainly convenient, since all his paraphernalia is easily obtainable and his procedure comparatively safe. If future employments of his method result as satisfactorily as the case he illustrates, then the operation will become a standard procedure, and Dr. Dawbarn a public benefactor.

The bloodless method of amputation at the hip joint is now a recognized operation and is one of the triumphs of modern surgery. To Trendelenburg is due the idea of transfixion with a single long needle at the upper part of the thigh, with a strong elastic cord drawn tightly around the limb above the needle; but it is due to Wythe to so modify and improve the method as to elevate hip joint amputation from the position of one of our most formidable and fatal surgical operations to one of comparative safety. The manner of performing this operation is thus described: The patient is so placed that the hip to be operated on is brought well over the corner of a table, and an Esmurch bandage applied, or the limb elevated a while, for the purpose of lessening the supply of blood in the part. Two steel needles, three-sixteenths of an inch in width and a foot long, are used. One of these is thrust deeply through the external tissues of the upper thigh, so that the point will emerge about half way betwen the great trochanter and the iliac spine. The second needle is passed through the adducter, just internal to the saphenous opening and one inch below the crotch, and should come out one and one-half inches in front of the tuber ischii. The points should now be covered with corks, in order to protect the hands of the operator, and a strong elastic cord be wound tightly around the limb just above. The Esmurch bandage should now be removed and the proper subcutaneous flap dissected up to a level with the lesser trochanter, at which point the muscles are squarely divided and the bone sawed through. All blood vessels and veins, as well as arteries, visible are now tied with catgut ligatures, and the tourniquet loosened. Should no bleeding be perceived, the head of the femur is then enucleated by dividing the attached muscles close to the bone and opening the cap-

sule as soon as it is reached.. The rest of the operation should then proceed as in the usual way. So far as I can learn, there have been performed in the United States up to date five of these operations, and all of the patients recovered. In view of the fact that the terrible death rate after the old operation was due to hemorrhage, that compression of the aorta or the iliacs has not rendered the procedure less dangerous, that Trendelenburg's single needle method have all proved far from satisfactory, have we not great reason for congratulation in an operation of such magnitude which so far has been universally successful?

SACRAL HYSTERECTOMY.

A most unique operation has sprung up in the past few years, but has only of late gained the light of public notice.

Kraske's method of reaching the pelvic cavity, or "sacral hysterectomy," as it is more properly called, is alluded to here merely to show the strides that surgery has made in the past twelve months. As the name implies, the operation consists in cutting out a portion of the sacrum for the purpose of removing a highly cancerous womb. Up to date no less than twenty-three such operations have been performed, and only eight of these have been reported unsuccessful. But it is very questionable if any such operative procedure is ever justifiable. After cancer has invaded the broad ligaments, or has extended so far as to render the older surgical methods inoperative, then it were better to let such cases eke out the balance of their existence *uncut* than to resort to a procedure which only adds so brief a respite to the inevitable. It is furthermore very questionable if a single survivor of such an operation will live to see the end of her third year, and should she live to see that time, it is finally very questionable if death were not far preferable to such an expedient.

No report on surgery would be complete without some allusion to the surgery of the bladder. In this department, as in the foregoing, many marked advances have been made in the past few years. Only a short time since the removal of calculi

entire and the lateral method were the favorite operations with the surgeons of the world. Today the crushing process and the median or suprapubic operation have supplanted former methods, while the old and long favored lateral operation is almost relegated to the past.

Cystoscopy, or the art of inspecting the interior of the bladder, has attained quite recently a state of almost perfection. By its assistance we are now enabled to not only scan the interior, but to establish a strict differential diagnosis between the various forms of inflammation of the bladder. It is easy to detect by its aid ulcerations, to localize foreign bodies, and, especiall,y to plainly make out the number, size and position of stones; to precuss them with the beak of our instruments and diagnose any tumor indigenous to that region of the body. By its aid unnecessary operations are avoided and most important ones performed; even, too, when the old reliable *searcher* has failed to establish a diagnosis or to justify an operation. The cystoscope, as now improved, is one of the most scientific instruments in the armamentarum of the surgeon, but it is difficult to use it satisfactorily and successfully except in the hands of an expert.

If time allowed, it would afford me pleasure to call up several other topics for consideration, subjects which are claiming the earnest attention of surgeons, and which reflect the same upward and onward progress of surgery. Hernia, for instance, one of the best besieged subjects in our practice, and one to which more different procedures have been directed than any other in surgery, still holds out against our art. Scores of methods have recently been reported for its cure, many of which I have personally performed. The standard of the day, however, seems to be McBurney's operation, or some similar method of direct heniotomy. The whole procedure can be stated in a few lines. Return the intestine, if reducible; dissect up the sac, and ligate it close to the internal ring; stitch pedicle and pillars together and dress the wound with antiseptic gauze, so as to heal the entire cut up from the bottom, using the strictest

antiseptic precautions all through the operation. This, in a nutshell, is the method of the day, yet I will urge this postscript, that, after any operation for inguinal hernia, we should always apply a well-fitting abdominal supporter, not a truss, to our patient, and require him to wear it for a year. Unless some such device as this is resorted to, failure after herniotomies will happen in a large per cent of cases, under the well-known law that new formed tissue and cicitrices will gradually give away before steady and prolonged pressure upon them. Therefore, as soon as the patient is able to bear the pressure of an inguinal supporter, put it on, and make him wear it incessantly for many months. I have operated very many times for the relief of hernia, and when my failures occurred they were mainly attributable to a neglect of this precaution.

I would like to have called to your notice the recent successes in thyroidectomy, as well as to the methods of injecting thyroid juice for the cure of myxodema, now being so extensively and at the same time so satisfactorily employed by German surgeons. But this paper, now too long, must be brought to an abrupt termination, for fear I tax your patience beyond a reasonable endurance.

In conclusion, gentlemen, I must thank you for your attention and for the marked and singular honor you conferred upon me through the appointment to this chairmanship. I must also ask your indulgence for the cursory manner in which many of my subjects have been dealt with and for the failure in omitting mention of many others. While only a limited portion of the great surgical field has been investigated, a sufficient number of important topics have been brought before you to establish the status of our art today, and to confirm the assertion which I feel safe in closing with—that both the art and science of surgery have materially advanced since our last report, made two years ago.

A CASE OF SUPRA PUBIC CYSTOTOMY—REMOVAL OF MEDIAN LOBE OF PROSTATE GLAND—DEATH FOURTEEN MONTHS AFTER THE OPERATION.

BY IRVIN POPE, M. D.

TYLER, TEXAS.

On July 6 a message came for me to go to see a patient, and stated that the party had not been able to pass any urine for four days, and that the doctors could not get any instrument into the bladder. Expecting to have some trouble, I asked Dr. J. G. Daniels to go with me.

On arriving at the house we found the patient suffering a great deal, and obtained the following history: George T. Coland, aged sixty-five years, had been troubled for years with some bladder complaint, and has had to have his urine drawn on several occasions by a physician. On July 2d he sent for a physician, and he failed to introduce an instrument and advised him to go to Tyler. He was put in a wagon and brought to Tyler, about eighteen miles, over a rough country road. On examination the bladder was found distended until it reached the umbilicus. Temperature 102°, pulse 120, feeble; a slight delirium. After trying to introduce an instrument, and finding the mucous membrane badly lacerated, we decided to aspirate. The puncture was made in the linea alba, about an inch above the pubes. Thirty-two ounces of bloody urine was withdrawn, and still there was quite a quantity remaining; but for fear of hemorrhage it was thought best not to completely empty the organ. Another trial was made to introduce an instrument, and finally a small catheter was successfully passed and made secure. A saline cathartic was prescribed. On returning that afternoon the catheter was found to be clogged with clotted blood. After

trying to dislodge the clots by throwing water into the catheter the instrument was withdrawn. An effort was made to introduce another, which was a failure. The bowels had moved, but the patient complained very much of pain. An operation was proposed, and promptly declined. Another aspiration was done, and sixteen ounces of bloody urine was withdrawn. Temperature was down and patient was resting quietly.

The next morning his condition was the same as when we first saw him. The family were told that death was only a question of a short time unless an operation was performed. Consent was given.

Assisted by Drs. Daniels, Smith and MacKenzie, the operation was performed. Chloroform was the anæsthetic used. All the surroundings were thoroughly septic. The patient was placed upon a table, but on account of his weak condition all the preliminaries were done before giving the anæsthetic. The abdomen was scrubbed with soap and hot water, the pubes shaved, and the entire field was irrigated with a 1–2000 solution of bichloride of mercury. The patient went under the influence of the anæsthetic without any trouble. An incision was made in the linea alba, about two and a half inches long and reaching within half an inch of the pubes. As soon as the bladder was reached two silk ligatures were passed into its walls, and the organ was incised between them; towels rung out of hot bichoride of mercury solution were laid over the abdomen. A gush of bloody urine followed the incision. After emptying the bladder, the finger was inserted and came in contact with the enlarged median lobe of the prostate gland. The walls of the viscus were much thickened and covered with a tenacious bloody mucous. It was irrigated with a hot Tiersch solution, and blood in considerable quantities escaped. We decided that the hemorrhage was coming from the median lobe, and it was thought best to make the attempt to remove it. Having nothing with me but a large Jarvis snare, this was armed with a wire and the lobe was encircled. As the wire was tightened the hemorrhage ceased. The wire not

being strong enough, soon broke. The hemorrhage had now ceased, and as the patient had been some time under the influence of the anæsthetic, it was decided to put on a dressing and await developments. A "T" tube was introduced into the opening and an antiseptic dressing applied. The patient reacted nicely, and the next day was free of fever.

On the fifth day an attempt was made to introduce an instrument per urethra, and failed. On the tenth day, after telling the patient the probable outcome of another operation, it was decided to again explore the bladder, and, if possible, to remove the lobe, and if this should fail, to make an artificial meatus above the pubes. The patient being chloroformed, and assisted by Drs. Daniels, Smith, McKenzie and Starley, the original incision was enlarged. The tumor being readily made out, a uterine eccrasuer, armed with a strong wire, was passed around the lobe and slowly tightened. About thirty minutes was consumed in the removal. There was no hemorrhage. The bladder was washed out with a hot Tiersch solution. The tube was inserted, when, to our surprise, blood commenced to flow from it. Hot water was tried, and failed; antipyrine, twenty grains to the ounce of water, was used, and still the hemorrhage continued. The patient was getting very weak, when, as a last resort, two ounces of Monsell's solution to two quarts of water was used, and the hemorrhage ceased instantly.

We now had a new trouble to deal with—a bladder filled with clotted blood. As much of the clotted blood as was thought prudent was removed with dressing forceps, and two large male catheters were introduced instead of the tube. The patient's condition was very bad. He was put to bed, hot water bottles were placed around him, and in about an hour he reacted. The next morning the bladder was irrigated with hot water and nearly all the clots were removed. Temperature, 101° Fahrenheit; pulse, 110. In the evening irrigation was again used. Temperature, 100° Fahrenheit; pulse, 100. The second day after the operation the patient was free of fever and the improvement was rapid. On the twelfth day after the removal of the

tumor a Banks filiform bougie was introduced per urethra, and left in place for twenty-four hours. The sizes were gradually increased, and on the twentieth day urine was passed per urethra. The tubes were removed from the supra pubic wound, and it healed nicely. In six weeks from the day of removal of tumor patient was discharged. He reported from time to time, and was able to return to his farm and gather his crop. He was cautioned about doing any violent work. Fourteen months after the operation he attempted to do some heavy lifting, and was taken with a severe pain in the bladder. A physician was summoned, and from what I have been able to learn, the symptoms point to a rupture of the organ. No urine was passed after the seizure, and the patient lived but a short time. No autopsy was permitted.

In calling your attention to this case I have done so for the following reasons: The age of the patient; the length of time he had gone without voiding his water; the secondary operation; the size of the tumor (two and one-half ounces, or twelve hundred grains); the method used to check the hemorrhage, and that no bad effects followed the use of Monsell's solution; the complete recovery; the cause of death.

SOME PRACTICAL WORK IN SURGICAL TREATMENT OF THE LIVER.

BY J. CUMMINGS, M. D.,

AUSTIN, TEXAS.

In view of the fact that many cases of disease of the liver are left unexplored and unrelieved, to pass a short life of more or less painful existence, that may be amenable to proper surgical means, prompts the writer to give some of his experience in line with recent developments in almost every department of visceral surgery. Should the disease that may come under observation result in abscess of the liver, then the danger is from long delay, leading to breaking down of too much tissue of the organ; then, if operative means are resorted to, an exhaustive discharge, that ends the life of the victim, may follow, or, if not, a more speedy death from blood poisoning from the absorption of retained matter. Often, in case of gall stones, the same process of delay leads to death, and the cause, if known definitely, is only shown by a post mortem examination. Such a case came under my observation. The man dying suddenly, the post mortem examination revealed the gall cyst filled with gall stones. These remarks may apply more directly to the surgery of a few years past, when to invade the sacred precincts of the peritoneal cavity during life was considered extremely dangerous, even in ovariotomy, in which field more work was at that time done than in any other part of the abdominal cavity. Yet I must claim that it is not too late to make these allusions today, as patients may be found lingering with these diseases, unexplored and not definitely recognized.

The first case I will mention is that of Mr. McL. I was called in consultation with Dr. F. A. Maxwell, of this county. The patient was about thirty-five years of age, had been sick for

some time, was very much reduced, had suffered with fever most of the time, and some rigors. There was pain and tenderness over the region of the liver, but not much enlargement, and in front, nothing definite pointing to localized disease. It was evident that something was slowly exhausting the vitality of the patient, and the tenderness, pain and previous history of the case pointed to the liver. We therefore decided to introduce the largest size aspirator needle into the posterior part of the organ. At first we thought the exploratory effort was negative, but after withdrawing the needle it was found to be obstructed. Its contents were forced out and proved to be pus. I then made, assisted by Dr. Maxwell (the patient being under the influence of chloroform), an incision of sufficient magnitude to allow free drainage into the back part of the liver, and reached the abscess cavity, when there was free discharge of pus, resulting in the speedy recovery of the patient.

Attention is called to the case of B. F. C., recently published in Daniels' Texas Medical Journal, when I made a free incision, relieving an over-distended gall bladder, due to obstruction of the common duct from gall stones, leading to discharge of an immense quantity of bile and several gall stones, and recovery of patient.

February 28, 1892, I was called to see Mr. N., aged about thirty-five years, in consultation with Dr. R. S. Graves, of this city. The doctor had not attended the case but a few days; the patient had, however, been sick, confined to his bed, over a month, with high fever and great pain in the region of the liver. Evidence of liver disease was marked, there being extension of the liver, dullness below the ribs and some more prominence of this side of the body. An exploratory operation was recommended, and performed the next day. Not less than one quart of very offensive pus was evacuated from the liver. The patient had suffered the night previous to the operation with hiccough, and was very much jaundiced and in an extremely low condition. Free drainage was maintained, and some improvement of the patient's condition followed. However, the exhaustive

and offensive drain was too much, and he died about one month after the operation. Before he died a counter drain was established on the posterior latteral aspect of the liver, communicating with the original opening, which opening was made in front over the lower border of the organ.

H. R., aged about forty years, male, was attacked December 10, 1891, with fever, and complained of considerable tenderness over the liver. Percussion dullness was increased, and I then informed patient that if he did not get better soon I would, with his consent, make an exploratory incision to ascertain the cause of his suffering. As he had for several years been subject to attacks of bilious colic, I suspected obstruction from gall stone. Pain in the region of the liver during this attack was so severe that I gave the second hypodermic injection in one hour, and resorted to chloroform before I could relieve his intense pain. This attack passed off, and he was up until February following, when he sent for me again. While there was some pain over the liver, I did not then think the attack a severe one. However, notwithstanding I gave him anodynes and purgatives, his condition grew worse and his pain was constant and severe, requiring morphia, hypodermically administered, to relieve him. The percussion dullness now extended below the ribs about two inches, and there was soreness on slight pressure with finger. I recommended the use of the knife as the only definite means of ascertaining the cause of his trouble and as the most certain means of curing his disease. He consented to the operation, and on the morning of February 13, assisted by Drs. Graves and Robertson, the patient was put under the influence of chloroform, when I made a free opening through the abdominal wall to the liver. The finger revealed a cyst on the surface of the liver. The largest size aspirator needle was introduced into the cavity of the cyst; nothing came away but thin, broken-down blood, and not enough to empty the cyst. I then inserted the needle in different directions. I could feel no gall stones, or anything that threw light on the existing condition. The idea then occurred to me that a large trocar and

conula might admit of at least the emptying of the cyst. I inserted a large-sized one, but still the contents of the cyst would not flow sufficiently to empty the sac. I then used my finger and broke the cyst alongside of the conula, when there was a free flow of thick, broken-down blood, followed by pus mixed with blood, of that red brick-dust color often found in abscess of the liver. Now the nature of the disease was quite clear to my mind—an abscess existed, a blood vessel had given way, a kind of apoplexy followed. The blood pressure had been sufficient to burrow through the tissue of the liver to the surface, forming the cyst that was so plainly found on the surface, and probably producing the constant suffering that he was subjected to. My patient recovered without fever or pain, and is now up, and has gained very much in bodily weight since the operation.

From the latest researches in this field of inquiry, I find that exploratory operations are recommended whenever the cause is obscure of liver disease, often developing gall stones and obstruction where no previous enlargement of the liver or gall cyst pointed to the same. It is recommended that where the duct can not be relieved of the obstruction, an opening be made between the bowel and cyst, or cystic duct, above the obstruction, stitching the structures together so as to permit the bile to pass freely into the bowel when the patient is very weak and probably unable to bear the deeper and more dangerous operation. I think it best to attach the cyst to the opening in the abdominal wall and allow external drainage, at least until the patient recovers sufficient strength to make the more radical operation less dangerous. Finally, after experiencing the difficulty in exploring the common duct in operations on the liver, as well as reaching obscure abscesses of this organ, I have made some post mortem examinations for my own satisfaction, the result of which I here give, and if some explorer in this field is aided thereby I will be sufficiently repaid for making these observations and writing this paper. The first subject operated on died from injury to brain, and there was no disease of the liver.

After uncovering the liver I found that a line drawn from the ilium to the hollow of the sacrum passed directly over the gall cyst. I made an incision over this line at the lower border of the ribs in a subsequent subject who had a healthy liver, the person dying from a gunshot wound in the cervical part of the spinal cord. I found the cyst lying under the free border of the liver very readily, yet two or three inches higher up than the lower border of the ribs. From this incision it would be difficult to explore the common duct where it entered the bowel. I further observed that in the healthy liver the lower margin of the organ is directly under the tenth rib, consequently a more direct opening can be had by cutting between the tenth and eleventh ribs, beginning at the line given above and extending the incision toward the front, separating the anterior cartilegin-ous attachment of these false ribs. This is the most accessible incision over a liver not enlarged by previous disease. Should some enlargement exist, however, leading to the liver, reaching the lower border of the ribs, or still lower, then to begin at the line referred to and cut forward would probably give the most accessible locality from which to explore the gall cyst and common duct, as well as the entire lower parenchymatous structure of the organ. In each of the three last cases reported above, the opening with the knife was made large enough to admit of one or two fingers for exploratory purposes before the needle was used. By this procedure the further exploration of the liver, either by the needle or probe or otherwise, is very much facilitated, and is recommended as the best mode of making the required examination known to the writer.

A CASE OF BRAIN SURGERY.

BY J. W. CARHART, M. D.

LAMPASAS, TEXAS.

Whilst in attendance upon the meeting of the Mississippi Valley Medical Association, at St. Louis in October, 1891, I was invited by Dr. A. C. Bernays to be present at a series of operations to be performed by him at Pius Hospital, in that city, at 7 o'clock a. m. on the 15th of that month. Arriving at the hospital in ample time I met a number of medical gentlemen who, like myself, had been invited there to witness the operations. There were two laparotomies, one of which, though peculiarly difficult, was completed in thirteen minutes from the time of complete anæsthesia, and was a perfect success. But it is my purpose, in this short paper, to speak of an unique case of brain surgery.

A lad, Ben De Long, about nine or ten years of age, was brought into the operating room and introduced to us as one of the patients to be operated on. The history of the case, as near as I can recall from memory, was as follows:

A few years prior a tumor developed on the left side of the head and was removed by a quack, who applied some sort of caustic. Not long after this the boy became subject to spasms of a peculiar kind. The spasm invariably began in the thumb of the right hand and index finger, and extended up the forearm, involving the arm and head sufficiently to draw the head to the right. He never lost consciousness nor fell, but when he felt premonitions of a spasm, as he usually did before a completed attack, he would call for assistance; and if standing when attacked, would remain so until the attack had passed off.

He had been under treatment of several eminent physicians, but grew worse, and it was finally decided that an operative procedure was justifiable and demanded, and offered the only hope of relief. It was at first proposed to open the calvarium on the right side and explore that region of the brain involving the centers for the thumb, wrist and arm. It was suggested, however, that these centers for the right side would be found on the left side of the brain. It was at the same time stated that the lad was lefthanded, and it was asked what bearing, if any, that fact would have in locating these centers. It was decided that "lefthandedness" was functional and not organic, and would therefore have no bearing in this case.

Accordingly, as soon as the patient was thoroughly anæsthetized, a semi-circular cut, through skin and periosteum to the bone, was made on the left side of the head, as shown in the photograph herewith submitted, and the flap turned down, giving ample room. By following the bregma back to a point directly above the fissure of Rolando, that is to say, a point from which, if a line were let fall, it would pass directly over the fissure of the Rolando, and from said point drawing another line, backwards, at an angle of about 45°. At a point on this line about one and one-half inches posterior to the fissure of rolando will be found the centers involved in this case. An area of considerable size, say two or three inches, was penciled off on the skull, and with mallet and chizzle the section was soon made and the bones lifted from its place.

This had no sooner been done than it was evident that the anticipations of the surgeon were correct, for before the meninges were cut out a dark spot was visible, and a tumor, immediately beneath the meninges, could be distinctly felt.

Accordingly, a crucial incision was made in the membranes and the tumor cut out, which was about three-fourths of an inch in diameter. The cutting out of the tumor removed the centers for the thumb, wrist and part of the arm from the brain. There was free hemorrhage, which was arrested without difficulty, the membranes were replaced and stitched carefully, the

scalp brought back to its place and stitched, as shown in the picture, and the whole head was then encased in a plaster of paris skull-cap, and the patient put to bed. He was discharged from the hospital in one month, nearly well.

This is another remarkable instance showing with what impunity the brain can be entered when done with proper anticeptic precautions; and it also shows with what precision the different centers can be located and the brain lesions detected by external symptoms.

Dr. Bernays has our sincere thanks for the privilege of seeing this operation, and we are glad of this opportunity of making this first report of this unique case. With these splendid examples before us, it is impossible to foretell the future of brain surgery, which, as yet, is but in its infancy.

THE RADICAL CURE OF INGUINAL HERNIA—BASSINI'S METHOD ILLUSTRATED, WITH REMARKS ON RECURRENT AND VENTRAL HERNIA.

BY SAMUEL E. MILLIKEN, M. D,

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With the advent of antiseptics, the surgeons were not long in trying to find some operative procedure which would relieve the thousands of beings suffering from hernia. Up to the era of cleanliness, or antiseptics, the peritoneum was entered with the greatest reluctance, and then as a last resort, being practically limited to those cases of strangulated hernia which had baffled all palliative measures. Taxis, was, no doubt, often carried too far, and when the operation was necessitated it was considered very skillful to be able to relieve the constricting band without entering the hernial sac.

During that period, the various subcutaneous methods were instituted, silk and silver wire sutures being employed for closure of the hernial opening. The number of cures effected in this way can best be illustrated by saying that such operations are entirely out of date.

HEATON'S OPERATION.

The subcutaneous injection of a solution of white oak bark into the inguinal canal, can be termed a daring, rather than a scientific procedure.

Having been able to follow a number of these cases from the time the injection was made until the hernia recurred, and subsequently had cutting operation performed, I feel that my observations are convincing.

(Read before the Texas State Medical Association, April 27th, 1892.)

The danger from peritonitis is of little importance, for in not a single case have I seen such symptons arise and it was proven on dissection, that the fluid had sometimes been placed on the serous surface, along the canal, but not infrequently it was found to have been deposited in the surrounding structures instead.

All that can be expected from this method is a temporary barrier to the protruding viscus, as the infiltrated mass, the result of the irritant, will eventually be absorbed, leaving only the stain of the white oak bark.

THE CUTTING OPERATION.

Before describing the method under consideration, I shall endeavor to mention a few of the points at fault in some well-known methods.

1. MAC EWEN'S.

Which consists in the formation of a pad by throwing the sac into folds and invaguating it into the inguinal canal:

The first and immediate danger to be anticipated is sloughing of this fibro-serous membrane, the vitality of which must necessarily be lowered. When suppuration does occur, a sinus may remain from a few weeks to several months; one case has come under my observation, in which two years had elapsed without any inclination for it to close, and in this instance the hernia had recurred as well. Should immediate union of the wound be obtained, it is nature's endeavor to remove this, or any other foreign body that may be so placed, hence absorption sooner or later.

2. THE OPEN METHOD.

In which the inguinal canal has been so successfully replaced by a cicatrical plug, and which offers such flattering immediate results, has afforded me the most admirable opportunity of studying the self destruction of adventitious tissue.

Six weeks after the operation, which is the usual time that the advocates of this procedure, keep their patients in bed, a

contracted cicatrix, from two to three inches long and one quarter of an inch broad, prevents very successfully, even the slightest impulse. A number of these cases have come under my observation—the larger proportion of them having worn no truss until the recurrence had taken place;—this precaution seems to me a very wise one. Under such conditions the most delicate pressure from without added to the constant force being exerted from within, would no doubt hasten a process that is inevitable, *i. e.*, stretching and thinning of the cicatricial mass. The recurrent herniæ observed after this method during the first six months, have been rather a separation of the cicatrix, usually at the sight of the eternal ring, from the musculo-tendinous structures adjacent. It is, however, the more gradual process; the thinning of the cicatrix which concerns the comfort and ultimate welfare of the individual operated upon. I have observed repeatedly, and demonstrated the same in my lectures at the New York Polyclinic,—peristalsis of the intestine, through the cicatrix. It is needless to say that the wearing of the most perfectly fitting truss occasions great discomfort.

One other complication that sometimes occurs in these cases, as in other abdominal sections, where cicatricial union is obtained, is the adhesion of the peritonium, which causes the patient such agonizing pain on coughing.

3. SUTURE OF THE EXTERNAL ABDOMINAL RING.

The best demonstration, to me, of the inefficiency of the closure of the external abdominal ring, is brought out in a paper by Dr. Bull, read before the New York State Medical Association, September, 1889, in which he was able to report forty out of sixty-nine cases—all were inspected at periods varying from a few months to six years.

"Twenty of this number had been operated upon by excision and ligation of the sac; the remaining twenty had excision and ligation of the sac, together with suture of the pillars of the external abdominal ring."

According to the report: "By both methods, in all varieties, there were sixty per cent of cures and forty per cent of failures."

With the above clinical facts, I am convinced that the size of the external abdominal ring has nothing to do with the causation of hernia. Whether it be closed with cat-gut or silver wire, after ligation and excision of the sac, the percentage of recurrence will continue to be large, just so long as the abdominal contents are allowed to enter the inguinal canal; for once there, the closed pillars will soon yield under the constant strain. The condition of the sac, I must confess, is quite secondary to that of the internal ring, as is demonstrated by the frequency with which reducible hydrocele is met with, demonstrating that there exists a communication with the abdominal cavity without a hernial protrusion. It is the operation for reconstructing the inguinal canal that I wish to call the attention of the Association, believing that the method will appeal to one and all as thoroughly scientific and practicable.

CLEANSING.

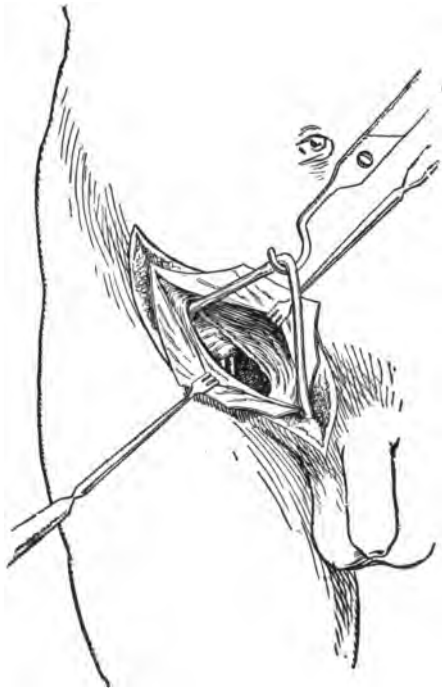
The pubis and scrotum being cleanly shaven, the skin should be soaped and scrubbed with a coarse brush; next the whole area must be washed with plain water; subsequently ether is applied to remove all oily material, and lastly with a 1000 corrosive sublimate solution. Great care should be used in thoroughly cleansing the glans-penis which is so very liable to infect the wound during the operation.

OPERATION:—BASSINI'S METHOD.

The patient being thoroughly anasthetized, (I prefer ether, administered with the "Ormsby Inhaler,")—an incision beginning at the spine of the pubis, extending upward and outward. The upper extremity should be about two inches internal to the anterior superior spine of the ilium—everything is divided down to the tendon of the external oblique. The latter is incised over a grooved director, passed into the external abdominal ring, superficial to the hernial sac and cord structures. To expose

the internal ring properly, the tendon should be cut for about two, to two and one-half inches. The upper flap is now freed from the underlying structures and reflected towards the median line, until the conjoined tendon composed of the internal oblique and transversalis muscles is brought well into view. The lower flap or segment of the anterior wall of the inguinal canal is next dissected from its underlying fascia, until the shelving process of Pouparts ligament is exposed. These flaps being held back by retractors; the next point of technique is to hook up with the index finger the cord structures as they pass over the spine of the pubis and lift them and the hernia out of their bed. This blunt dissection should be continued until you have reached the internal ring. The hernial sac without reducing its contents, should now be isolated; this is best done by dividing the overlying structure on a grooved director until you have exposed the bluish-gray thickened membrane for a small area. This coat is raised with a small pair of rat-toothed forceps, that the hernial contents may not be injured when the opening is made. The entrance into the peritoneal pouch will be manifested by the escape of a small amount of serum, unless it be an incarcerated or strangulated hernia, when the fluid will be tinged with blood. The contents having been examined, all adhesions that may exist are tied off with fine cat-gut. Large masses of omentum should be ligatured, not necessarily at the most distal point, but where the greatest constriction exists and it is advisable to use the transfixion method. Occasionally it occurs that the obstacle to reduction is a fibrous constriction situated within the internal ring. That is however, easily detected at this stage of the operation and can be divided without danger by incising upwards. Returning to the treatment of the sac; which must be completely separated from the cord and other adherent tissues, well within the internal ring. A moderate amount of traction being made uniformly at all points, which is best accomplished by a series of artery forceps held by an assistant:

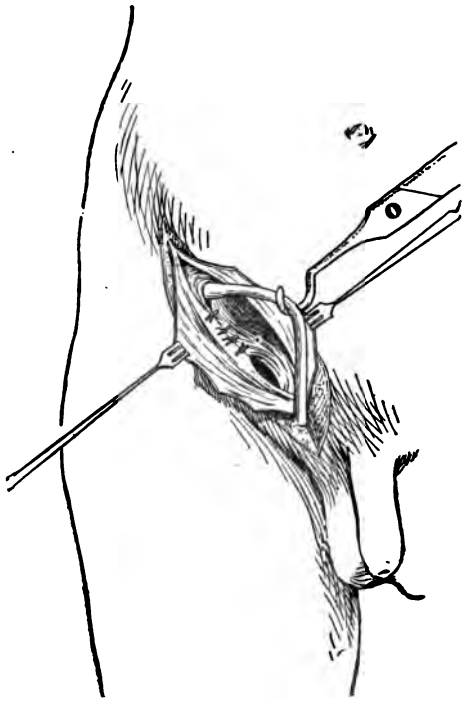
Ligation with cat-gut is done also by the transfixion method. The sac is excised leaving the pedicle about a quarter of an inch in length which immediately retracts within the abdominal cavity. When a congenital hernia exists, the sac should be cut off one inch above the testis. The reforming of the tunica-vaginallis is of no importance, and the prevention of hydrocele will thus be attained. This completes the first step of the operation.



SECOND STEP.

The upper and the lower flaps composed of the segments of the tendons of the external oblique, being well retracted, the cord structure held out of the operative field by a blunt hook or the finger of an assistant; the conjoined tendon on the upper side is now united to the shelving edge of Pouparts ligament by a series of interrupted, chromatized cat-gut sutures. The

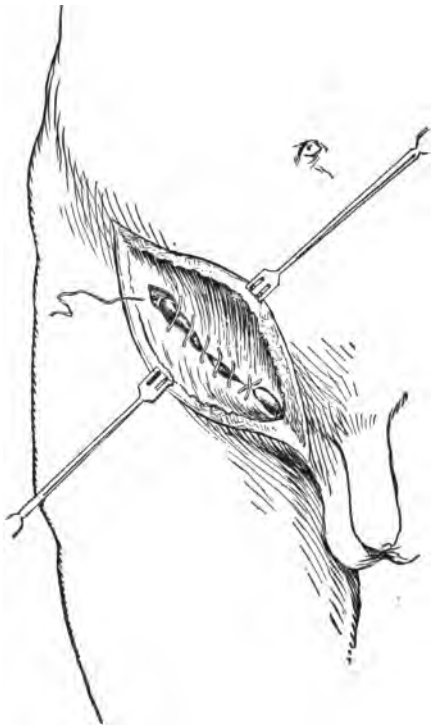
MacEwen blunt-pointed needle accomplishes this admirably. The needle when passed through Pouparts ligament, must not include more than one-quarter of an inch for the edge. The relaxed posterior wall of the canal, composed of the transversalis fascia may be included in the upper grasp of the needle, along with the conjoined tendon. From four to six sutures, inserted in this way, will be sufficient to firmly unite the muscalo-tendonous structures, forming a new posterior wall for the canal. In this re-construction care must be taken not to constrict the tissues of the cord.



THIRD STEP.

The formation of the anterior wall of the canal is accomplished by suturing the recently divided external oblique tendon con-

tinuously with fine cat-gut, throughout its entire length. This re-establishes the valve like condition of the inguinal canal.



The skin wound is closed with interrupted cat-gut sutures after the insertion of a small glass drainage tube from two to two and one half inches long into the lower angle of the wound, and the following dressing is applied:

Iodoform powder (or what is preferable, fine crystals) should be spread along the line of suture and around the drainage tube; on this a strip of lister protective or rubber tissue two inches wide and long enough to overlap one inch at the ends, a perforation being made for the drainage tube; moist iodoform gauze, six layers thick and sufficiently long and broad to overlap the

wound two inches on all sides, also perforated for the drainage tube; next a large compress of moist sublimated gauze is placed over the upper part of the wound and held in position by a two inch strip of surgeons' rubber adhesive plaster, extending almost entirely around the pelvis; an intervening layer of rubber tissue should be used to prevent infection from the plaster; over the drainage tube is placed sublimated gauze, very loosely distributed over this, cotton, and lastly covered by rubber tissue one foot square, which is perforated for the penis and held in position by a Hank truss or simple spica bandage. The advantages of having the above dressing are several: First, infection from without is prevented by the rubber tissue, which is most external, and by the small strip which is in immediate contact with the skin. By means of the adhesive plaster alone, can perfect retention of the deeper dressing be accomplished. However, the most important point in this detailed dressing is the arrangement of the drainage tube which can be removed at the end of thirty-six or forty-eight hours by simply taking off the external dressing and not disturbing that which is in immediate contact with the wound. After its (the drain) removal the point of exit should be iodoformised well, covered with loose sublimate gauze and a new protective dressing applied. Where animal sutures have been employed, the wound should heal under one dressing, even in cases of strangulation.

Confinement in bed three weeks has been the maximum since I have been performing this operation, and in but two cases has that occurred, in each of which I endeavored to discard the glass tube and adopt capillary drainage with strands of cat-gut. In each instance a moderate amount of retention took place, and primary union was prevented. No case should be permitted to leave their bed before a fortnight, as too great a strain will be put on these freshly united structures.

AFTER TREATMENT.

In all my cases, when this or any other radical operation has been performed, I insist on the wearing of a truss for six

months. The choice of apparatus is a subject worthy of consideration, as it would not only be uncomfortable but hazardous to apply a truss with a powerful spring, on the other hand a light and uncertain support must be avoided. Any of the frame or complete band trusses, preferable with a water pad, will give the greatest comfort to the patient and will afford the most uniform and perfect support to the inguinal region.

CONCLUSIONS.

No attempt has, or shall be made to present to the Association a statistical paper, as sufficient time has not elapsed in any of my cases to pronounce them radically cured. Suffice it to say that during the past eighteen months, I have operated after this plan on about twenty cases, and as yet not a single recurrence has appeared. However, with the author's permission, I shall make a few quotations from Professor Bassini's book, which was published in 1889, and as late as September, 1891, he wrote me that the percentage of cures was quite as large in proportion to the number operated upon as at the time of the original report.

STATISTICAL REMARKS.

"Two hundred and sixty-two were operated upon, ten of these were strangulated. Of the two hundred and fifty-one non-strangulated cases, one hundred and eight were observed from four and one-half years to one year; thirty-three were observed from one year to six months; ninety-eight were observed from six months to one month; seven recurred; four, the result unknown; one died of shock."

SECTION ON MEDICAL JURISPRUDENCE AND PSYCHOLOGY.

AN INEBRIATE ASYLUM FOR TEXAS.

BY M. B. KENNEDY, M. D.

HILLSBORO, TEXAS.

Mr. Chairman and Gentlemen—I have chosen for my subject today, "A Inebriate Asylum for Texas." The excessive use of intoxicants is alarmingly on the increase, and the whole civilized world is crying out against this inexorable fiend, "the drink habit."

Is there not some way to stem the tide of drunkenness, which is fast engulfing in its maelstrom of destruction all that is lovely and beautiful of earth? More fatal in its sweep of ruin and desolation than the deadly simoon which fans the arid sands of great Sahara—more blighting in its effects on mind and body than the lurid lightning, or "the pestilence that walketh abroad in the broad glare of noonday." Let Texas—bright, beautiful Texas—be the first in this grand army of redemption of the poor irresponsible inebriate. With what pride can we point to Texas' splendid system of education; her three insane asylums, the peers of any in this glorious commonwealth; her two penitentiaries, in which the criminal is made to expiate his crime, but, at the same time, is most humanely treated and the best of medical attention given him. When it is proven under a writ *de enquirendo lunatico* that a man or woman is insane, they are immediately sent to an insane asylum, there to be treated by the very best medical talent the profession affords. They are sometimes cured and restored to the bosom of their families. Should they commit a murder, as Purnell did when he killed

the good and greatly to be lamented Dr. Reeves, the Ægis of the State is thrown around them and they are declared innocent.

When a man is under the influence of liquor, can anyone doubt for a moment his insanity? All nations recognize the fact that a drunken man is insane, and knows not what he does while in an inebriated condition; but none, so far as I am aware of, have given him the same status as the lunatic. Ancient Greece, the proud mistress of letters and the arts, recognized this truth, and declared *he methe estin mikra mania*, "drunkenness is a short madness."

The "drink craze" has been recognized for many years as a symptom of disease. Scientific study has firmly recognized the fact that the excessive use of intoxicants will in all cases cause disease and diseased conditions.

The use of alcohol, morphine and other narcotics is in many cases a marked symptom of insanity. One fact has been known for many years, and generally occurs in neurotics, who, after some great strain and mental unrest, become excessive drinkers, and continuously, or at intervals, stupefy themselves with such drugs. Let such persons be arrested and lodged in jail, and thereby be deprived of spirits, and they soon develop acute mania, or melancholia. Thus it appears that the spirit and drug craze were only symptoms of insanity, concealed and marked by the spirits.

It is a startling and alarming fact that the number of inebriates, of every form and condition, is rapidly on the increase; and already our large army of neurotics and defectives is day by day growing larger. How, then, to stem this tide, which is sweeping, as with a besom of destruction, the brightest intellects of the fair State of Texas?

We must turn from the quack and charlatan, who promise much, but perform nothing, to the intelligent physician. The neurologist must show us the road along whose pathway we should tread, and stimulate the family physician to study these early psychical symptoms, which, like signal flags of distress, greet us at every turn.

Out of the sixty thousand physicians of the world, less than one hundred have given any treatment for this fearful malady. The first one to point out the earlier causes and remedies should be the family physician. The specialist can study these cases in asylums. We shall never be able to solve the drink problem except from a physiological and psychological standpoint. This solution must begin with heredity, growth, nutrition, culture, surroundings and mode of life. This is the path by which science must seek the solution of this problem. The prohibitionist, the Woman's Temperance Union and the temperance crusaders have as yet accomplished nothing, and they never will. By what law have they the right to enter the rumseller's saloon and destroy his stock in trade? He has violated no law; he is a peaceful, law-abiding citizen, and the great State of Texas has given him the right to sell hell-fire to his fellow man, to dethrone his reason, to impoverish his loving wife and children, and to convert a loving and affectionate husband and father into a madman and demon. Surely, the roar and conflict of societies and parties will pass away, and only the voice of science and humanity will prevail. Then, and then only, will the mighty army of inebriates, criminals and insane be disbanded, and the poor irresponsible victims forced back to health and rational living. Then will the poor inebriate, now denied legal protection, be protected, cared for and housed. The saloon will then be no more, and alcohol, as a beverage, unknown. This will, indeed, become a reality when physicians study and treat the inebriate from a scientific point of view.

The "drink craze" is so insiduous in its first approach that there is probably no one disease more often mistaken in its earliest manifestations. The formative stage begins in slight changes of conduct and character, elation of spirits, increased activity of the intellect, the disposition, the manner, the temper, the habits and general character. Finally, when unusual conduct is manifested, the physician is called and the case clearly made out.

This formative stage of alcoholic and sexual excesses is attended with distress, loss, sorrow, and most serious blunders. In many cases criminal acts and sad domestic and pecuniary afflictions mark this period. This shows the paramount importance of an early diagnosis by the family physician, and a proper treatment based upon it. If such were the case, how very different the history and results that would follow.

When this formative stage has once become permanent, most of the cases end in death from pneumonia or some other acute disease. Others go to insanity, and become either a burden to their friends, or inmates of lunatic asylums; while a large majority remain as common drunkards, slowly growing worse year after year. They are shunned, ridiculed and treated as low, voluntary inebriates, despised, persecuted and punished, and die in the center of wretchedness and misery and frequently leave families of children, who have inherited the same defect and become a burden to themselves and the world.

Another class of drunkards, or drug takers, is this: A man, previously temperate and well, will have a history of profound mental shock, such as grief over the death of a beloved wife or children, or loss of property, or failure to realize some vaulting ambition, or some calamity that will distress him acutely. His entire disposition and nature will change, and the drink impulse will appear suddenly without any cause, and will continue persistently.

Another class of cases show symptoms equally well marked; thus persons who occupy centers of great care and business, or professional responsibility; persons who are most active in business, in the prime of life, previously temperate, who suddenly begin to take spirits and rapidly become excessive drinkers and defenders of its value as a medicine. Such cases are soon incapacitated and die.

In a third class of cases the use of alcohol or opium is a symptom of exhaustion and general brain failure. All these forms of brain defect are rapidly intensified by the chemical action of the spirit or drug used. The craving for drink or

opium is a symptom which should never be overlooked nor misunderstood. Any one who persists in using alcohol or opium to excess is suffering from some brain degeneration or disease, which requires scientific medical study and the greatest care, and should excite our profoundest pity and sympathy.

In a fourth class of cases, that of operatives and trainmen; one of the most prolific causes of the appalling accidents which are chronicled almost daily, is clearly the free use of spirits by the trainmen. Statistics for 1891 show that in round numbers over twenty-five hundred persons were killed instantly and over twenty-two thousand injured by accidents on railroads in this country. The mortality among passengers for 1891 was greater than for several years past. These figures are startling, and show a comparative greater fatality than any of the modern wars. Most of the railroad companies recognize this fact, and promptly discharge all employes found drinking. They endeavor to select sober and temperate men, but are only partially successful. Many men who claim to be temperate use spirits at home as a domestic medicine, and frequently by the advice of some unthinking physician. These persons never drink in public nor on festive occasions, and yet they are dangerous alcoholics, because unsuspected and unlikely at any moment to do strange, insane acts.

Railroad men, of all others, are psychologically most exposed to this form of drinking. Their irregularities of living, the nerve and brain strain, sharply predispose to exhaustion, insomnia and all its train of dyspepsias and neuralgias. It has been truthfully said, alcohol in any form is a most seductive narcotic. The mental activity and attention constantly required in every position makes railroad employment far more exhausting and perilous to a healthy brain. The sense of peril and danger that he is constantly made to pass through is a perpetual strain on his nerves. On the other hand, he may be a secret alcoholic drinker, and a prescription with spirits may unmask a long train of degeneration. Or, if a previous ab-

stainer, the alcoholic narcotic may be so grateful and pleasing as never to be abandoned.

Railroad companies can not prevent their employes from drinking spirits. They cannot prevent brain injury from the secret use of alcoholics, hence accidents will happen. Shorten the hours of labor, give responsible men more time to rest, with better opportunities to live regularly, and a very important means of prevention will be applied.

We should implore our legislators, by the divine love of the Great Physician, to hasten the glad day when the poor despised inebriate, now denied legal status, will have a home and there be healed of his infirmities as certainly as those were who bathed in Siloam's miraculous pool. We should urge them to pass and create the following law, or one similar in import:

An Act Providing for the Establishing and Maintaining of an Asylum for Inebriates.

1. Be it enacted by the Legislature of the State of Texas: That the sum of———thousand dollars of the United States bonds, and the interest accruing thereon, now in the treasury, be appropriated, set apart and applied under the immediate direction of the governor, comptroller and treasurer, in the erection and furnishing of a suitable building within the limits of this State for an asylum for inebriates, which building shall be so constructed that it shall be susceptible of any additions that may be hereafter required.

2. That the governor be and he is hereby authorized to appoint three commissioners, whose duty it shall be to select a proper site for the asylum, and to secure, by donation or purchase, not less than———hundred acres, nor more than——— hundred acres of land, which shall not cost the State more than ———dollars per acre. The commissioners shall report their proceedings to the governor within thirty days after their appointment, together with the deed for the land donated or purchased, which deed shall be duly recorded in proper office and

filed in the office of the secretary of State. The commissioners shall receive five dollars per day while in actual service.

3. The governor, upon receiving the report of the commissioners, shall, with the comptroller and treasurer, let out the contract, or contracts, for the building of the asylum under similar restrictions and liabilities, so far as the same may be applicable, to those which were in force upon said officers in the erection of the treasury building and governor's mansion, and the same requirements which were made by the contractors in every respect, so far as the same may be applicable, shall be made from those who contract to do the work necessary in the construction of the asylum for inebriates.

4. That as soon as he may deem it necessary, the governor shall appoint a suitable superintendent, who shall be a skillful physician, and experienced in the treatment of the inebriates, and such other assistants, male and female, as may be required to carry out the objects of this act. The superintendent shall have a salary of———thousand dollars per annum. He shall report to the governor semi-annually all the expenses of the asylum, with such other information as may show the condition of the asylum and its inmates.

5. That the governor shall appoint five managers for the asylum for inebriates, said managers being citizens of the State of Texas. Of those first appointed one shall serve one year, one two years, one three years and two four years, and their successors shall be appointed for a term of four years, or, in case of a vacancy during the term, for the unexpired term.

6. The managers shall receive as compensation for time actually employed in this service four dollars per day, together with——cents per mile for all distances traveled in said service; provided, that their services shall in no instance exceed forty days in the year. They shall have general direction and control of the property and business of the asylum. They shall have power to make, with approval of the governor, all necessary by-laws and regulations, not in conflict with the laws of this State, for the government of the institution, and of its

officers, employes and inmates, and for the admission of visitors. They shall prescribe the duties of all persons employed about the asylum, and fix their salaries, except in cases especially provided for by law; and may at pleasure discharge any person or officer in the asylum, except the superintendent. They may, with the concurrence of the superintendent, appoint an assistant physician. They may take and hold in trust any gift or devise of real or personal estate for the benefit of the asylum, and shall make such application thereof as the donor may prescribe; provided, that no such application be in conflict with the policy and objects of the asylum for inebriates. They shall examine the accounts and vouchers of the superintendent and approve of such as may be necessary and proper. They shall exercise a careful supervision over the general operations and expenditures of the asylum, and direct the manner in which its revenues shall be disbursed.

7. The managers shall hold quarterly meetings at the asylum, when a majority shall constitute a quorum for the transaction of its business. One or more of the managers shall visit the asylum and inspect the same once in every month, or oftener, and they shall keep a full account of their proceedings, in a book to be provided for the purpose, and shall make a report to the governor on the first day of October of each year, setting forth the conditions and wants of the institution.

8. The treasurer of the State shall be and act as treasurer of the asylum for inebriates; shall collect its dues and pay out its revenues only in conformity with the laws of the State and the by-laws of the institution; and he and his sureties on his official bond shall be liable for any violation or neglect of duty. He shall make a report to the governor of the condition of its finances and expenditures on the first day of October of each year.

9. The superintendent shall be the chief executive and medical officer of the asylum, and shall, subject to the by-laws, have care and control over everything connected therewith. He shall attend to the enforcement of the laws and by-laws, and

see that all subordinates faithfully perform their duties. He shall, with the consent of the managers, employ such persons as may be necessary to the service of the institution, and may, for cause, discharge them. He shall be ex-officio secretary to the board of managers, attend to repairs and improvements, disburse and account for all moneys belonging to the institution that may come into his hands. He shall give bond in the sum of ten thousand dollars, with two or more sufficient sureties, to be approved by the treasurer of the State.

10. If information in writing be given to any county judge that any person in his county is a confirmed inebriate, and that the welfare of himself or others requires that he be placed under restraint; and if said judge shall believe such information to be true, he shall order such person to be brought before him, and twelve competent jurors of the county to be summoned, who shall be sworn to inquire and a true verdict render whether such person is a confirmed inebriate or not; whereupon the matter shall be tried, and if the jury shall return a verdict that the person is a confirmed inebriate and should be placed under restraint, the same shall be recorded, and the county judge shall thereupon order him to be sent to the asylum for confirmed inebriates. Upon the trial herein provided for, the examination and the testimony of witnesses shall be reduced to writing and filed, and the proceedings of the county judge shall be recorded by the clerk of the county court.

11. It shall be the duty of the county judge on ordering a person to be sent to the asylum to ascertain, 1st, the number of his family, if he has one, and their ability to maintain themselves; 2d, the value of his estate, if any, and 3d, the ability of persons legally liable for his support. And he shall make an order specifying the amount which should be paid out of his estate for his support in the asylum, and shall cause a record by the county clerk of these facts.

12. Any patient may be discharged from the asylum upon the recommendation of the superintendent, approved by two or more of the managers.

13. When a patient is discharged he shall be furnished with suitable clothing and with money sufficient to pay his necessary expenses home.

14. The amount to be paid for the board of patients admitted into the asylum shall be at the rate of two dollars per week for each person supported by the county; and for any other person that the managers may find not to be possessed of sufficient estate to support him and his family, or that they may find not having persons thus able to support him who are legally liable for his support.

Mr. Chairman and gentlemen—When such a law is enacted the saloon—the devil's workshop—will have passed away from our beautiful Texas forever, and the poor despised drunkard will then take his proper place in society, and be restored to the loving bosom of that long suffering but patient wife. That noble, gifted boy, the pride of fond parents, will be snatched from his downward road to hell and restored to happiness and usefulness—perhaps to be heard from in our legislative halls. We should ever remember that this insidious disease, "the drink habit," is all about us, and may at any time invade our homes and firesides, and hence demands our recognition and most careful study above all moral and ethical levels.

The insane impulses to drink, which overcome all the efforts of the individual who may be so unfortunate as to inherit them, present the same indications for treatment as do the suicidal and homicidal impulses: Seclusion from society and the occasion of temptation, and the necessary restraint in a suitable institution.

The dipsomaniac should not always be treated with the greatest gentleness and forbearance, but he should be restrained, using force if necessary. There are some people so foolish as to look upon it as a great disgrace to send a relative or friend to an inebriate asylum to be treated and cured, yet think it no disgrace for the head of a family to absent himself from home and business and insanely conceal himself in the hell holes of

of the city, there to drink until intoxicated, and to continue his course until health, business and families are ruined.

It is the duty of the conscientious family physician to educate those families entrusted to his care respecting their duty in such cases, and to instruct them that inebriety is a disease, curable as other diseases are; and the patient, be he whom he may, should be restrained for a sufficient length of time to be cured.

In conclusion, I would urge that this honorable and learned body do appoint a committee of not less than three to wait upon our honorable legislators and urge upon them the paramount importance of creating an inebriate asylum for our most unfortunate class of citizens. And thousands will rise up to bless the legislators who shall create such a home for the now despised drunkard.

SECTION ON STATE MEDICINE AND PUBLIC HYGIENE.

REPORT OF J. L. CUNNINGHAM, M. D., CHAIRMAN,

FORT WORTH, TEXAS.

As chairman of the Section on State Medicine and Public Hygiene I do not propose to confine myself strictly to the requirements of the by-laws, giving an account of the advances and discoveries of the past year on this section. Instead of doing so, I propose to submit for your consideration a proposition to amend the quarantine bill passed by the Twenty-second legislature just before its adjournment, whereby the interests of internal sanitation may be better subserved without impairing the quarantine service. The time has come, in my humble opinion, when we physicians, as the natural guardians of the health of the people, should labor to convince our legislators that quarantine is not all of preventive medicine, and that there are other diseases besides yellow fever which need to be looked after and checkmated by law.

By wise and judicious health laws, faithfully and honestly enforced, such diseases as bowel affection, typhoid fever, diptheria, smallpox, etc., can be as effectually controlled as yellow fever. For every victim slain by yellow fever, these other diseases in the aggregate, slay their thousands and tens of thousands. Now, if the State can by slightly modifying the existing health laws, save so large a number of lives with little if any additional cost, she surely should do so. And I think the legislature will make this modification if we act discreetly in the premises. For the present, let us say nothing about regulating the practice of medicine. We may have our individual views on this subject, but I submit, is it good strategy to press it at this time? Our repeated mortifying defeats before the legis-

lature ought to convince us that it is premature, in Texas at least, to agitate the question of regulating the practice of medicine, however desirable it may be *per se*.

The homeopaths, eclectics and even a great many physicians of that class styling themselves "regular," who are not in affiliation with the Texas State Medical Association, will oppose it. This class is very numerous, being about ten to one as compared numerically with the membership of the Texas State Medical Association. The past history of medical legislation by Texas legislators proves this. A board of medical examiners and a State board of health may be desirable for a completed, rounded, symmetrical health system, but they are not a necessity, and they are innovations to our people, and are sure to meet determined, dogged resistance with the chances in favor of defeat, together with all health reform measures. By grasping too much there is danger of losing all. Let us divide up and ask only for what is most important. A conservative estimate puts the loss to Texas annually from diseases that can be prevented by intelligent, systematic and persistent effort at 8000 lives of citizens and $10,000,000. This appalling loss to the State should challenge the attention of her lawmakers. If this estimate is exaggerated some one ought to controvert it. Until it is controverted it will be a standing reproach to legislators.

A State board of health and a board of medical examiners of themselves would not materially change these figures. But local boards of health intelligently organized in every nook and corner of the land, efficiently equipped, and all put under control of the State health officer, would materially reduce them. And why should the State health officer not be as capable of managing the health affairs of the State as would be a State board of health? Give him a good salary and the necessary help and he would be a very good substitute for a State board of health. For my part, I think it at least debatable whether this arrangement would not be better than the State board of health system. Responsibility is the main ingredient of success. To divide responsibility is to weaken it, and thus impair the chances of

success. It is not thought necessary to have a land board for the State to manage its land affairs, nor a government board to manage the government of the State. One governor attends to the latter, and one land commissioner attends to the former, and and there is but one president of the United States, not a board of presidents to divide the responsibility and multiply the expenses.

Again a State board of health to be productive of good results must be composed of the best men of the profession. To attend to the business of the board it would be necessary for the members frequently to leave home and be away from their regular professional business. Now, in justice to themselves and families, could they do this for the meager pittance that is usually doled out to members of State boards of health? For, with the exception of the secretary, the honors are supposed to be a sufficient remuneration for the members of the board, or perhaps their expenses are paid. What physician does not know how ruinous it is to be continually leaving it? The inevitable result is that our best men will not serve. Hence, I say it is at least debatable whether it would not be better to have one first-class physician to give his whole undivided attention to the business. Let his salary be ample and hold him alone responsible for the good management of the health department. The advantages of this plan are:

1. It would supply a long felt want, *i. e.*, each unit of government—city, town or village and county or precinct—would take care of itself, at its own expense, in preventing preventable diseases and be responsible therefor, and at the same time would have the benefit of the supervision and counsel of the State health officer—for the telegraph has annihilated space—resulting in a perfect organization of the health forces of the State; as different from the present system as order, system and responsibility is different from disorder, confusion and irresponsibility.

2. There would be but little innovation on existing methods, viz: A change from the potential mood in the imperative in

enacting a law creating local boards of health, making the law mandatory and not simply permissive, and transforming the State health officers from a mere quarantine agent to a veritable, sure enough health officer.

The beneficent effects sure to follow speedily so commend the system that there would be no trouble in getting further legislation if deemed advisable. Let us go slow. Do one thing at a time and do it well.

I do not propose to elaborate the details of a health bill, but would like to mention a few things appertaining to local boards and to the State health officer as to some extent defining their respective duties, and showing their relationship to each other and to physicians.

It shall be the duty of the health officer of each local board once each year to report to the State health officer the proceedings of this board, and such other facts as may be required by the State health officer, and in accordance with instructions received from him. He shall also make a duplicate report to his local board at the same time. He shall make special reports whenever required to do so by the State health officer.

The State health officer shall have general supervision of the public health of the State, and shall have power to make, promulgate and enforce such rules and regulations as may be necessary for the preservation of the same.

He shall reside at Austin, and shall put himself in communication with the local boards throughout the State; shall keep and file all reports received from such boards, and all correspondence of the office appertaining to the business of his office.

He shall prepare blank forms of returns, and such instructions as may be necessary, and forward them to the health officers of the several boards of health in the State.

He shall collect information concerning vital statistics, knowledge respecting diseases, and all useful information on the subject of hygiene; and through an annual report and other-

wise, as he may elect, shall disseminate such information among the people.

He shall publish and disseminate among local boards a monthly bulletin of the health and mortuary status of the State as gleaned from the reports of health officers of local boards.

It shall be the duty of every practicing physician in the State of Texas to report immediately to the health officer of his jurisdiction every case of yellow fever, smallpox or cholera that may come within his practice; and any physician who shall fail to report to the said health officer any such case within a reasonable time, shall be guilty of misdemeanor, and upon conviction thereof shall be fined in the sum of not less than one hundred dollars nor more than one thousand dollars, or by imprisonment in the county jail for not less than three nor more than six months.

It shall be the duty of the district judge of the circuit courts of the State to give in charge of the grand juries of their respective courts section 11 of this act at each term thereof; and it shall be the duty of the grand juries of the said several courts specially to investigate in their respective counties the offenses therein specified, and to present impartially all offenders against the same; and it shall be the duty of the prosecuting attorney of the jurisdiction to present and prosecute all offenders under section 11 of this act.

In conclusion, I would respectfully call the attention of the Association to the fact that we are on the eve of an election for the men who are to make our laws. It is for you to say whether or not we shall make this question an issue in the impending campaign.

STATUS OF MEDICAL EDUCATION IN THE UNITED STATES,

BEING THE ANNUAL REPORT OF THE DEAN TO THE BOARD OF REGENTS AT THE COMMENCEMENT EXERCISES OF THE FIRST SESSION OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF TEXAS.

BY J. F. Y. PAINE, M. D.,

GALVESTON, TEXAS.

Mr. President, Ladies and Gentlemen—I am permitted this evening to announce that the medical department of the University of Texas has been successfully organized. The session that closes this day has fully maintained the high standard ordained by its founders, and this occasion should excite a feeling of lofty pride on the part of the distinguished gentlemen of the Board of Regents, whose wisdom and labor have given to the State an institution which affords her sons the most ample facilities for the acquisition of the highest order of medical education.

No unusual event has occurred during the progress of the session, but much arduous labor has been performed and substantial results have been achieved. The crudities and friction incident to newness were speedily overcome, and in the early weeks of the course every department had been systematized, and the varied machinery of the school was moving smoothly under the direction of an industrious and harmonious faculty. Our list of matriculates has been small (but twenty-four names

[Read by the Dean, Dr. J. F. Y. Paine, before the Section of State Medicine of the Texas State Medical Association, and ordered by resolution to be published in its transactions.]

having been enrolled upon the register), a circumstance which finds an explanation in the fact that the faculty had not been selected until a brief period before the beginning of the session, and the public announcement of the opening of the school was so delayed that students had either already left the State or made plans to go elsewhere. Even now, letters of inquiry arranged indicate that it is not generally known that the medical department of the University is in operation.

The dependence of the common welfare on medical education, and the interest of the public in the qualifications of men to whom their lives may be committed, prompt me to present a few facts relating to this important subject. There are at the present time in existence in the United States 135 medical colleges of all kinds. This number has not materially changed during the last ten years. New schools have been established, but a corresponding number have gone out of being. The geographical distribution of these institutions is by no means uniform, twelve being located in New York, fourteen in Missouri and fifteen in Ohio, while Alabama, Connecticut, Louisiana, New Hampshire, North Carolina, South Carolina, Texas and Vermont have but one each. Very little progress was made in medical education during the half century from 1830 to 1880. Two annual courses of lectures, the second a repetition of the first, and a short period of reading under the tutorage of a preceptor constituted the sum of didactic instruction. First and second course students sat side by side, listened to the annual iteration of facts, saw from year to year the same anatomical and physiological models and preparations, and viewed demonstrations on the same old manikins, which were considered sufficient to make a skillful physician of an illiterate booby as well as of a man with academic training. Twenty years ago there was not a medical school in the United States, of which I have knowledge, that required attendance upon more than two courses of lectures before graduation, or exacted a proper preliminary education as a condition to matriculation. The spirit of progress, however, which is characteristic

of the nineteenth century, has lent inspiration to medicine, and that science is today in the line of march, touching elbows with other departments of knowledge. A review of the changes for the better since 1882 furnishes ample cause for congratulation. In that year the colleges requiring educational qualifications for matriculation numbered 45, against 129 that did so in 1891. In 1882 only 22 colleges required attendance upon three courses of lectures before graduation; today 85 impose that restriction. The duration of the lecture terms has been gradually increased from an average of five and a half months to six and a half months (in eight schools the time was only four months), 111 colleges now have sessions of six months or more, when in 1882 there were but 42 which had such long terms. The better class of schools now embrace hygiene and jurisprudence in their curriculum, and students are required to do practical work in the laboratories of chemistry, physiology, histology, pathology, bacteriology and pharmacology. But the movement of higher medical education has not stopped with this. Four colleges will soon exact four courses of six to nine months each.

The popular error prevails that the ratio of physicians to population is increasing each year, and that the number of medical students is becoming overwhelmingly disproportionate. This impression, which constitutes the main ground for unfavorable criticism of new medical schools, cannot be sustained by statistics. In the United States there are 106,000 doctors and a population of 63,000,000—*i. e.*, 1 physician to 594 people. Many of these medical men die or retire annually, and their loss, as well as the demands of the growing population, is, under the law of the "the eternal fitness of things," supplied by the various medical institutions of the country. In all the schools of the country in 1880 the total number of medical graduates was 3882, or 1 to every 10,093 of the population. In 1890 the number was 4492, the ratio being 1 to 10,399, which shows a decline in the number of physicians relatively to population during the last decade. And it can scarcely be doubted that the reformation of medical education will have the effect of

reducing the proportion in greater degree during the next ten years.

The higher requirements of medical schools do not appear to have materially affected the gross number of matriculates. In 1880 there were in the United States 11,864 (1 to 3311) people, and 14,884 (1 to 3204) in 1890. But the ratio of graduates to matriculates has been reduced; it was 33 per cent in 1880, whilst in 1890 it was 30 per cent.

It is interesting to note the effect of the restrictions of the Illinois State Board of Health, which became operative after the session of 1882–83. It is needless to explain that this board enjoys the powers of a medical examining and licensing body. It is stated in the report of that board for 1891, comparing the two periods of three years each, of 1880–83 and 1883–86. that in Illinois, Indiana, Iowa, Michigan, Missouri and Ohio the crusade against medical illiteracy resulted in 2257 fewer students and 727 fewer graduates in the second than in the first period, although these States had gained about 500,000 population in the latter triennium. In four States, namely, Tennessee, Kentucky, Georgia and Maryland, not so influenced, the poputon had increased 825,784 in the past ten years, and there was an increment of 1553 students out of a total increase of 3020 for the entire United States, in which the gain in population was over 12,000,000. It is thus seen that the medical schools of the four States last named furnished during the last decade 51 per cent of the total increase of medical students in the United States, while their enhancement in population was only 7 per cent of the gain of the whole United States for the same period.

The relation of the comparative requirements of the different medical colleges to the qualification of their respective graduates cannot be definitely determined by any test now in operation, but it is a significant coincidence that the schools whose ratio of graduates to matriculates is largest, furnished the highest proportion of rejected candidates before the various State examining boards. The statement has been made in another connection that the per cent of graduates to matriculates in all

of the medical schools collectively in the United States in 1890, was thirty. It will be seen however, that that ratio fluctuates between wide limits, if comparison be made between a few colleges of known high standard and a large number of others considered to be first-class. Thus Harvard University, University of Michigan, College of Physicians and Surgeons of New York, University of Pennsylvania, University of Virginia and Tulane University of Louisiana together show 26 per cent to be the proportion of graduates to their matriculates; whilst that of eighteen of the most prominent and largely attended colleges in Kentucky, Tennessee, Georgia and Maryland is 38 per cent. The returns of examining boards would seem to sustain the inference to be drawn from these divergent ratios. There have appeared before the examining boards (since their organization) of Alabama, Minnesota, New Jersey, North Carolina, South Carolina and Virginia from the six schools designated (of which four required three courses of lectures) 151 physicians, of whom five, or 3 per cent were rejected. In the same period, and before the same boards, appeared from the eighteen colleges (none of which prior to 1890 exacted three courses of lectures) in the states named 494 doctors of whom 132, or 30 per cent, failed to pass. While this showing is an unflattering commentary upon the methods of medical education that have been obtained in this country, it demonstrates the usefulness of efficient examining boards; safeguards, as they are, against the encroachment of unworthy medicine men, "instruments for weeding from the fair domain of the medical profession the tares which have overgrown it, and from driving from the temple the charlatans by whom it has been defiled, dishonored and disgraced." The Illinois State board of health has set an example worthy of the emulation of every State in this union, and which could be imitated by our own great State to the incalculable advantage of every class of her citizens.

The expense of medical tuition seems to bear an even ratio to the degree of excellence of the different schools furnishing it; *e. g.* the medical fees of the six higher grade colleges already

mentioned, whose total period of instruction averages twenty-one and a half months is $409; while the average rate of the other class of the eighteen schools, with a means of twelve and a half months as the entire time of teaching, is $192. It can not be doubted that cheapness and easy facilities for graduation constitute the main attraction of some medical institutions, where the size of the class is the ambition, and the collection of fees for tickets the paramount concern.

The catalogues of twenty medical colleges for 1890, contain the names of 493 Texas students who attended lectures in those institutions in that year. Of that number 88 were registered in the six schools of higher grade, and 405 were distributed among the others, where the tuition was cheaper, the terms of study shorter and the graduation easier.

This exposition of facts leads to the conclusions that there has been a decided advance in medical education during the last decade as regards both the method of instruction and requirements for the degree in medicine; that the general ratio of students to population has not materially increased; that the general proportion of graduates to students has diminished; that the schools having the highest per cent of graduates to students furnish the largest number of rejected applicants before the State examining boards; that the cost of tuition varies with the standing of the schools and the advantages they afford, and that the large number of students leaving the State annually seems to indicate the necessity of a properly organized and thoroughly equipped medical school at home.

The statistics embraced in this report have been drawn mainly from the report of the Illinois State Board of Health for 1891 by its secretary, Dr. John H. Rauch, the most accurate, exhaustive and authoritative exposition of the status of medicine in the United States ever published.

The organized movement in favor of higher medical education in this country has, as has been shown, already produced valuable results. We are in the dawn of a new era in its history, and the regents of the University of Texas, imbued with a spirit

of patriotism and progress, and in the light furnished by the experience of similar institutions, have established its medical department on a plane that is in line with the leading medical colleges of the United States, and its faculty have registered the solemn edict that its standard shall be maintained. The school entered upon its mission with a full corps of eight professors, filling respectively the chairs of the eight essential branches of medical science. The lectureships on medical jurisprudence, diseases of the nervous system, chest, children, eye and skin created at the beginning of the course have proven to be valuable auxiliaries to our teaching force, widening the range of didactic instruction and enhancing the effectiveness of clinical work. The rules and curriculum have been arranged conformably to the demands of higher medical education, and are as follows:

Candidates for admission (matriculation) are required, first, to write an essay of about three hundred words in length as a test of orthography and grammar; second, to pass an examination in elementary physics. A candidate who has received a collegiate degree or passed the matriculation examination of a recognized college, or has a certificate covering the required subjects from a recognized normal or high school, may enter without examination. Students who have attended one course in a medical school (not homeopathic or eclectic) are admitted to the second year of the university course upon passing a satisfactory examination in osteology, descriptive anatomy, general chemistry, materia medica and pharmacy and the elements of general pathology. Students who have attended two courses in a regular medical school are admitted to the third year upon passing a satisfactory examination in topographical anatomy, general and medical chemistry, materia medica and therapeutics, physiology and the elements of general pathology. Graduates of regular medical schools in good standing are admitted to the third year without examination. Graduates of colleges of pharmacy in good standing are admitted to the second year upon passing the matriculation examination only.

The course of study extends over three years, which will be graded as follows:

First year—Didactic lectures upon: 1, osteology and descriptive anatomy; 2, physiology; 3, physics and general chemistry; 4, materia medica; 5, general pathology. Practical work in: 1, anatomy; 2, histology; 3, chemistry.

Second year—Didactic lectures upon: 1, topographical anatomy; 2, physiology; 3, chemistry; 4, materia medica and therapeutics; 5, pathology and practical medicine; 6, principles and practice of surgery; 7, obstetrics. Practical work in: 1, anatomy; 2, pathological histology; 3, medical chemistry. Clinical lectures in the John Sealy Hospital in: 1, general surgery; 2, general medicine; 3, cases in obstetrics.

Third year—Didactic lectures in: 1, materia medica and therapeutics; 2, practical medicine; 3, general surgery; 4, obstetrics and gynecology; 5, special pathological anatomy. Practical work in: 1, clinical microscopy; 2, bacteriology and morbid anatomy; 3, chemistry of ptomaines and other bacterial products. Clinics in: 1, general surgery; 2, general medicine; 3, nervous diseases; 4, diseases of skin, venereal and genito-urinary diseases; 5, obstetrics and gynecology; 6, diseases of the eye, ear and throat; 7, diseases of children; 8, diseases of the bones and joints; 9, lectures upon medical jurisprudence.

Methods of instruction are by didactic lectures, practical demonstrations, bedside clinics and surgical operations. Recitations keep pace with the lectures, and students are marked according to their proficiency. Term marks are reviewed at the close of the session, and the average made affects the result of the final examination. The manner of grading is similar to that used by all the branches of the university. The grading of the courses of study is rigidly enforced, and students are required to devote themselves exclusively to the classes to which they belong. Under this restriction first-year men are limited to the study of fundamental branches of medical science, much of their time being spent in practical work in the laboratories, where they acquire familiarity by touch, as well as by sight,

with every part of the human mechanism and with every agent that is brought in relation with it. This system does not encourage our students to engage in practice after one year's study, a custom which, though much in vogue, can not be too emphatically condemned, as an imposition upon society and a travesty upon the medical profession. The most ample facilities, however, are afforded second and third course students for clinical study, daily clinics at the hospital being given throughout the entire session by members of the faculty. The number of patients available for clinical study is not so large as in some of the hospitals in the more populous cities, yet there is always at hand a rich variety of cases, representing almost all forms of medical ailments peculiar to this climate, and a wide range of surgical afflictions and accidents.

I have heard it intimated that our entrance examination is an interference with the inalienable right of young men to pursue the study of medicine whether they are educated or not. The absurdity of such an impression must be apparent when it is known from experience that the average untutored youth can not comprehend the teachings of the medical colleges of today. The institution of State boards of medical examiners has exposed the amazing and incredible extent of the illiteracy in the ranks of the medical profession, and the organization of health boards requiring accurate returns of vital statistics has been the means of furnishing the most ludicrous examples of astounding ignorance among graduated physicians.

It has been insinuated that the fees of the medical department are too great, but reference to the charges of other high grade schools will show that view to be erroneous. As a matter of fact the leading colleges of this country, as a rule, exact high rates, while the contrary is the case with the low grade institutions.

The public need to be educated to a just appreciation of medical qualification to make a proper discrimination between true science and the assumption of ignorance and empiricism, and to offer every encouragement and facility for the acquisition of

thorough medical education. "The end of medicine," says Aristotle, "is health." Consider what that means; not merely healing the sick, but teaching the people how not to be sick.

The faculty stand committed to devote their time, energies, what of talent and ability they possess, to the advancement of medical education and to the making of this institution what its projectors intended it should be—a source of pride to the State, a credit to the profession of medicine, and a blessing to mankind.

SECTION ON GYNECOLOGY.

DISEASES OF THE FALLOPIAN TUBES AND THEIR TREATMENT.

BY THOMAS MOORE MADDEN, M. D., F. R. C. S. Ed.,

DUBLIN, IRELAND.

The accurate differential diagnosis and successful or radical treatment of fallopian tube diseases have only become generally obtainable within a recent period, and for that advance we are largely indebted to the teaching and practice of Mr. Lawson Tait and some other leaders of the modern school of abdominal surgery. Nevertheless, it may not be superfluous to remind you of the somewhat ignored fact that the disorders of the uterine appendages were by no means unfamiliar to many of the older writers, by whom, and more especially by Astruc,[1] of Paris, in 1761, and by Kruger,[2] of Gottingen, in 1781, their pathology was fully discussed; whilst by others very remarkable instances of what we now term pyo-salpinx and hydro-salpinx, as well as other tubal troubles, have been narrated. Thus Portal[3] quotes, *inter alia*, a case from De Haen of "abscess in the left fallopian tube, which contained eighteen pints of pus;" and another from Munieks of "an enormous fallopian cystic tumor, the contents of which were estimated at upwards of a hundred gallons." He also cites from Harden the instance of "a woman in one of whose fallopian tubes was found encysted a hundred and forty pounds of an aqueous fluid." These or other cases of fallopian disease were also referred to by Bailey,[4] Hooper[5] and

1 Astruc—Traite des Maladies des Femmes. Paris. 1761
2 Kruger—Pathologia Ovariorum Muliebrum. Gott. 1782.
3 Portal—Cours de Anatomie Medicale. Tome V., p. 540.
4 Bailey—Diseases of the Uterus, etc. P. 504.
5 Hooper—Morbid Anatomy of the Human Uterus. P. 3.

other writers of the first two decades of this century, and, above all, a little later, by Dr. Davis,[1] by whom the symptoms and pathology of diseases of the oviducts as then understood were distinctly described in 1835. From that time may be dated the general recognition of the fact that the fallopian tubes, being so intimately connected as they are structurally and functionally with the uterus, must necessarily therefore be liable to inflammatory diseases similar to those which affect that organ, however modified these may be in their symptoms and consequence by the special organization and relations of the oviducts.

The diseases which may be thus transmitted to the fallopian tube, not only from its uterine orifice, but also through its free peritoneal extremity, or which may originate within its structure, are, firstly, inflammation, or salpingitis, and its consequences—viz., pyo and hydro-salpinx—of which probably the most common causes are gonorrhœal infection and puerperal sepsis. Besides these, the oviduct may, moreover, be the seat of encysted, fibro-muscular and malignant tumors.

Acute Salpingitis.—Acute inflammation of the fallopian tubes may be here very briefly disposed of, inasmuch as salpingitis is seldom brought under gynecological notice until the disease has reached the chronic stage. It is most frequently observed attending the puerperal state as a complication or consequence of septicæmia, when its occurrence is indicated by deep-seated, throbbing pain, extending from the iliac region into the groins and thighs, together with local tumefaction and tenderness, recognizable by conjoint, recto-abdominal or bimanual examination over the course of the broad ligaments, in which the tortuous outlines of the hyperæmic and enlarged oviducts may be thus detected. The most common result of acute salpingitis is the chronic form of the disease. It may, however, also terminate in resolution or cure, as well as in the occlusion or obliteration of the ducts in any part of their course by the cohesion of their walls from plastic inflammatory exudations. As to the treat-

1 Davis—Obstetric Medicine and Diseases of Womb. Vol. II., p. 760. 1835.

ment of such cases, I know of nothing very reliable that can be recommended beyond allaying pain by opiates and administering quinine in combination with iodide of potassium or bichloride of mercury. Hot water vaginal, and rectal, irrigation, and external stuping are obviously indicated, and are most likely to prove successful in acute catarrhal salpingitis, whilst it is difficult to see what possible benefit can be produced by counter-irritation by blisters or strong mercurial ointment over the inguinal region, which, though still occasionally employed in such cases, are more likely to add to the discomfort of the patient than to cure the disease.

Chronic salpingitis may effect either one or both tubes; more generally both are implicated, although in different degrees. Its extrinsic causes may be either gonorrhœal, puerperal or catarrhal, whilst occasionally it may arise from local causes, such as tubercular and cancerous deposits in the tubes. Moreover, as might be expected, salpingitis and its consequences are more frequently met with during the earlier period of marital life, and in those in whom the utero-ovarian or sexual functions have been most exercised, than in patients more advanced in years and of non-erotic temperament. Thus Dr. Bland Sutton, who in his pathological investigations has had an extensive opportunity of examining the bodies of a large number of women of ill-fame, in most of these instances discovered evidences of hydro or pyo-salpinx, or in some cases found one or both fallopian tubes represented by an impervious cord and the ovaries atrophied and unrecognizable. This induces him to believe that the frequency of tubal disease between the age of twenty and thirty-five years, and its relative rarity about the fortieth year, is to be accounted for by the fact that, if the individual survive the dangers incident to an inflamed and distended tube, the diseased parts atrophy.

Symptoms of Chronic Salpingitis.—The general symptoms of chronic salpingitis, before the disease has eventuated in pyo or hydro-salpinx, are scarcely distinguishable from those of the generally co-existing oöphoritis, and, later on, its effects and

evidences are symptomatically almost identical with those of pelvic cellulitis or perimetritis, and in former days were commonly confounded with that disease. Of these symptoms of chronic tubal disease the most important are the recurrence of otherwise unaccounted for and generally unrelievable by ordinary treatment, attacks of menorrhagia, attended with dysmenorrhœa or impeded through protracted or excessive menstruation. In such cases the patient further complains of a characteristic deep-seated, intra-pelvic pain, which—in some instances from the first, and in almost all cases during the progress of the disease—sooner or later becomes acute or lancinating, shooting out into the sacral and inguinal regions, and extending down the thighs. At the same time may be also noted evidences of constitutional febrile disturbance and pyogenic rigors, and in some cases intra-menstrual hemorrhages or aqueous discharges from the uterus, together with local tumefaction and tenderness in the course of the oviduct discoverable on examination per rectum.

The pathology of pyo and hydro-salpinx has recently been fully investigated by a distinguished pathologist, Dr. Bland Sutton, and I can not do better in this connection than place before you the following abstract of his observations on this subject, which may be found in extenso in the Lancet of December 6, last year:

"*Pyo-Salpinx.*—In severe cases of salpingitis, after occlusion of the abdominal ostium, accompanied, as is usual, with stricture of the uterine end of the tube," the pus "is as securely locked up in the tube as it would be in a deep-seated abscess, and it follows the course of an abscess. The walls of the tube, stretched by the accumulating pus, gradually thin, and the inflamed tube becomes adherent to surrounding structures—ovary, uterus, rectum, intestine or broad ligament. The wall of the tube continues to thin until, on some slight exertion, it bursts. If the pus be discharged into the peritoneal cavity, it establishes rapidly fatal infective peritonitis. Right pyo-salpinx is very prone to open into the rectum. When a pyo-salpinx lies in contact with bowel, the pus it contains becomes abominably fœtid,

due to osmosis of the intestinal gases. The relation of pyo-salpinx to the rectum must be studied in connection with tubo-ovarian abscess. The first effect of salpingitis upon the ovary is to cause thickening of its capsule, and if lymph is effused upon its surface, this may organize and extensive perimetritic adhesions result. The effects of this thickening of the capsule are twofold. At first it prevents the rupture of ripe ovarian follicles, and the tension gives rise to considerable disturbance and causes pain; and as the enlarged follicles can not discharge their contents, it naturally follows that on section an ovary which has long been the seat of peri-oöphoritis will be found largely converted into cystic spaces, and two or more may become confluent and form a cyst the size of a walnut. As such a cyst enlarges and makes its way by absorption to the surface, it not infrequently comes into relation with and adheres to the dilated pus-containing ampulla of the corresponding tube, which has been brought in contact with it through the restraining influence of the tubo-ovarian ligament. Not infrequently absorption takes place, and the dilated ampulla of the tube will communicate with an enlarged follicle or cyst in the ovary, and thus give rise to a tubo-ovarian abscess, which may be discharged by way of the rectum at irregular intervals."

When the infective qualities of pus are not great a pyo-salpinx gives rise to few symptoms. It is this form of pyo-salpinx that, becoming gradually dilated with fluid, is eventually converted into a hydro-salpinx, which, as a rule, may be regarded as merely a late stage of pyo-salpinx.

Many milder attacks, however, may be described as "catarrh of the tube," and, like a nasal or gastric catarrh, subside and leave no trace. If the inflammation is sufficiently intense to seal the ostium, permanent danger results, and if, as is so commonly the case, both tubes are affected, they remain throughout life functionless, and often a source of grave danger. In cases of salpingitis sufficiently severe to occlude the ostium, the tube is, after the subsidence of the inflammation, in the condition of a blocked ureter; there is no escape for the fluid which is excreted

by the glands in its walls, or for the fluid which passively exudes into its cavity. It consequently forms a cyst by retention. The fluid is either colorless or greenish, owing to the presence of cholesterin.

In some instances the fluid, as before stated, may escape at irregular intervals through the uterus, constituting what has been described as "hydrops tubæ profluosis," and which is accounted for by Dr. Sutton as resulting from the occurrence of fallopian fistula in such cases. In other instances, again, the exudation may take place through the abdominal ostium of the tube, possibly giving rise to fatal peritonitis, or in non-septic cases to "hydro-peritoneum," which has been defined by Dr. Alban Doran as a collection of fluid in the peritoneal cavity that can not be referred to any tangible organic disease, except chronic salpingitis of a mild type with an unobstructed tube.

Before referring to the treatment of these conditions, I shall in the first place briefly recapitulate the excellent notes taken by my clinical resident, Mr. G. Whyte, of a case of chronic salpingitis, which may serve to exemplify the ordinary course and results of that disease:

A. O'N., aged twenty-four, unmarried, an anæmic-looking draper's assistant, admitted October 17, suffering from menorrhagia for two years previously. The changes, she stated, lasted from six to eight days, and were accompanied by much suffering. She also complained of almost continual pain in left groin and backache, together with a bearing down sensation. On vaginal examination the position of the uterus proved normal, and nothing beyond some slight endo-cervicitis being apparent except an unusual flattening of the roof of the vaginal posterior *cul de sac*. An examination by the rectum was made, on which distinct fullness and fluctuation was discovered in fallopian tube, which was much enlarged. The aspirator was employed, and a long needle was passed through vaginal *cul de sac*, and, guided by finger, *in situ* to most prominent part of tumefaction, at which it was introduced, and on turning the tap about six ounces of turbid puro-serous fluid was evacuated. No subse-

quent dressing was employed; the vagina and uterus both daily irrigated with hot water. She was put on iodide of potassium and bark mixture. Rapidly convalesced, and was discharged on December 9.

Treatment.—In the treatment of chronic salpingitis and the resulting pyro- or hydro-salpinx, it appears to be not unfrequently lost sight of, that in these, as in all other cases, the gynæcologist should set before him not only the removal of disease, but also the restoration of the functional and structural integrity of the affected organ, as far as these objects can possibly be combined and accomplished; and that only where the latter is impracticable, should he be content with the former. With this view several methods of dealing with the cases now under consideration have been suggested—viz., firstly, the removal of the contents, whether purulent or serous, of the distented tube by aspiration, as recommended by Dr. Routh, as well as some years ago by myself in several papers read before meetings of the Royal Academy of Medicine in Ireland, the Brighton meeting of the British Medical Association, and at the Washington meeting of the International Medical Congress, in which I also discussed the expediency and showed the possibility of catherisation of the fallopian tubes in certain exceptional instances. Secondly, by free incision per vaginam, and subsequent washing out of the emptied tubes, as advocated by Dr. Sinclair. Thirdly, curetting the endometrium around the uterine ostium of the tube, and Emmet's operation. Fourthly, employment of electricity by the method of Apostoli. Fifthly, by what may be termed conservative laparotomy—*i.e.*, abdominal section with the view either of aspiration of the distended ducts, or, as advocated by Mr. Alban Doran in some instances, for the purpose of breaking down adhesions and "freeing the diseased appendages." Sixthly, may be here mentioned the resection of the tube by salpingotomy or Skutsche's operation. Seventhly and lastly, in this connection is massage as employed by Brandt in such cases.

I shall not here waste time by referring in extent to any of these procedures, save those that I have myself proved the practical utility of. This is not the case with regard to salpingotomy, concerning which, as well as other "fancy operations" that may more safely be demonstrated on a lecturer's diagrams than in a patient's body, I would re-echo Dr. Goodell's criticism—"The diseased parts cannot be handled in abdominal section without great risk. The tube is often tensely distended, and adhesion to neighboring structures are usually intimate. Hence the tube may carefully be ruptured, intestines torn, and circumscribed collections of pus diffused." As to massage, even if harmless, it would be objectionable for the general reasons I have mentioned when referring to this subject in a previous lecture. But in cases such as those under consideration, even that negative merit can hardly, I think, be attached to a procedure like that by which, according to the writer just cited, one of its advocates—viz., Brandt—is credited with venturing to attempt the emptying of a distended tube into the uterus by "rolling it gently between the fingers of both hands," a manœuvre which, it is admitted, often causes "an escape of secretion into the peritoneal cavity, which readily gives rise to symptoms of peritonitis!"

Turning from these fond fancies of transcendental scientists or enthusiastic fadists to the sober realities of practical gynæcology, we may now consider the rational treatment of pyro- and hydro-salpinx, in regard to which there appears to me no reason to depart from the traditionally recognized first principles of surgery, by an indiscriminate resort, in the first instance at least, to such heroic operative measures as the complete extirpation of the uterine appendages. If the mammary gland, for example, becomes the seat of a purulent collection, or if, as Sir Spencer Wells suggests, the tumica vaginalis testis is the location of a hydrocele, would it not be more advisable to open the abcess or to tap the hydrocele than to amputate the breast or to remove the affected testicle? And must we then necessarily adopt an entirely different course as a matter of general

practice in dealing with analogous conditions in other no less important organs?

Acting on these principles, therefore, for several years past, I have, in the first instance at least, treated a considerable number of cases of pyo- and hydro-salpinx by aspiration and other conservative measures. The successful results thus obtainable in many, though by no means in all, instances of this kind have been proved in my wards in the Mater Misericordiæ Hospital. The majority of cases of this kind were there treated by that method, to which I have elsewhere referred, before its advantages were recognized. This treatment, even if not as certain in its radical curative results as salpingotomy, is certainly quite as successful in that class of cases to which its employment should be restricted, and at last contrasts favorably as far as facility of performance and safety from danger with the latter operation, which in other cases or after its failure may become no less expedient. Hence I shall venture for an instant to dwell on the details of the less serious method, which, as I believe, will in not a few instances be found to afford satisfactory results whenever tubal collections are accessible per vaginam. In the first place, to permit the necessary manipulation the patient should be put under some anæsthetic and placed in the ordinary left lateral gynæcological position. Then the operator introduces the index and first fingers of his left hand through the sphincter ani upwards and forwards along the outlines of the posterior uterine wall, the fundos being pressed down by his assistant's hand over the hypogastrium. In this way the tubes and ovaries can be readily palpated, and if there be any inflammatory or cystic enlargement of the former, it may be distinctly recognized as a tortuous, elongated, or sausage-shaped or rounded fluctuating tumor, extending, as Dr. Wm. Duncan says, "from the side of the uterus outwards to the broad ligament and backwards into Douglas' fossa." Having thus ascertained the position of the pyo- or hydro-salpinx, the next step is to carefully introduce per vaginam on the point of the right index finger a long fine needle affixed to the aspirator

up to the roof of the posterior vaginal *cul-de-sac*, through which it is to be passed into the retro-vaginal fossa, and thence guided by the operator's left index from the rectum up to the most prominent presenting part of the tubal swelling, into which it is to be plunged. The tap of the aspirator is then to be turned, so as to give exit to the contents of the dilated tube, the expulsion of which may be assisted by the steady pressure of the assistant's hand from about the hypogastrium down into the pelvic cavity, and continued until the tube is completely evacuated. After this the vagina should be rendered aseptic by insufflation with iodoform, and then no further local treatment beyond hot water irrigation will generally be required, unless the tube should, as sometimes happens, again fill, though probably to a lesser extent, when the same procedure may be again and again, if necessary, repeated until the oviduct has become reduced to its normal size.

Curetting Fundal Orifice of Tubes; Treatment by Electricity.—Apart from malignant and other degenerative changes, the most common immediate cause of cystic accumulations in cases of chronic salpingitis is mechanical obstruction of the uterine orifice of the oviduct, due either to chronic follicular endometritis, flexion, or, in some instances, supra-involution of the uterus. Under such circumstances the tubal obstruction is most likely to be relieved by dilatation followed by curetting of the diseased proliferating endometrium in the first instance, or by the rectification of the flexion in the second, and by faradisation in the last-named cases. The faradic current has, moreover, not only in these, but also in other forms of chronic salpingo-oöphoritis, been in some instances successfully employed by Dr. Apostoli, of Paris, who generally employs in such cases the faradic current of tension applied in moderate doses and for only a few minutes at a time, for which he claims the most remarkable curative results in such cases. Another recent authority on this subject—Dr. Milne Edwards, of Edinburgh, does not believe, however, that the galvanic current is suited to cases where there is definite organic change in the

ovaries, but considers that here faradism may possibly be of service.

Removal of Uterine Appendages.—In those graver and, as I hope may yet be found by others of higher authority than myself, somewhat more exceptional cases than is generally supposed, in which, from the extent of fallopian disease, or from the implication in its course of adjoining structures, the urgency of the symptoms attending its progress of other causes, it becomes impossible to deal satisfactorily or safely with such cases by the methods already referred to, and in which more active surgical intervention is obviously indicated, there then only remains for our adoption the complete removal of the uterine appendages.

That operation has, however, now come into vogue under other circumstances than these, being supported by a large number of modern gynæcologists, as not only the most efficient, but also, in the cases in which it is required, the safest method of dealing with the tubal diseases referred to; and hence the procedure which should be generally adopted in such cases. This doctrine I cannot, myself, altogether unreservedly accept, believing, as I do, that in some instances the results of salpingitis are curable without any active treatment, and that in other cases they are amenable to the minor measures I have described. Nevertheless, in this hospital and elsewhere I have met with cases in which the only apparent alternatives were either the speedy death of the patient from fallopian-tube disease or else the complete removal of the affected appendages, by what is generally known as "Tait's operation," after the name of the distinguished surgeon by whom it was introduced, and has been most successfully carried out in this country. In the following observations I shall therefore very briefly describe that operation, or, at least, that method of performing it which you have here seen practised, premising that, regarding, as I still do, the ovaries and tubes as both essential factors in the menstrual function, it follows that when the latter are removed, with salpingotomy should also be combined oöphorectomy, to obviate

the possible consequences of an abortive or abnormally-accomplished process of ovulation. Nearly all the preliminary successive steps of this procedure being identical with those of ovariotomy, I shall merely allude to those points in which these operations may be contrasted. The first and most obvious of these is the smaller size of the abdominal wound required for removal of the appendages. This incision should only be just sufficient to allow the introduction of the two first fingers of the operator's left hand, which should be passed down to the fundus uteri, by the position of which he will be readily guided to the contiguous tubes and to the ovaries. In such cases the often widely-distended oviduct must be most tenderly handled to avoid extravasation into the peritoneal cavity of a pyo- or hydro-salpinx, which may occasionally be prevented by aspiration of the diseased tube before any attempt to draw it out through the abdominal wound, as must be the next step in this operation when not rendered impossible by extensive inflammatory adhesions. Having thus drawn out, as far as can be safely done, the affected tube and ovary, so as to form a kind of pedicle from the broad ligament, through the centre of which, carefully avoiding injury to blood-vessels as far as possible in so doing, a blunt-pointed needle carrying a double ligature of stout silk is to be passed. This ligature may next be secured by an ordinary "reef knot," which I have found sufficiently reliable and easier to make than it would be for me to acquire the probably still better "Staffordshire knot," the use of which has been thus described by Dr. Macnaughton Jones:—"A loop of double ligature is passed through the centre of the broad ligament, avoiding the vessels. The loop is then turned back so as to include both the ovary and tubes in the two loops thus formed. One free end is then passed through the returned loop; both ends are now drawn together and then cut off." Whatever ligature be employed it should secure the pedicle, from which the ovary and oviduct are next to be separated by a blunt scissors curved on the flat, a little above the point of ligation, which may be then dropped back into the peritoneal

cavity. A similar procedure may then be adopted with regard to the remaining ovary and tube, after which the abdominal cavity may be washed out with warm water, the wound closed, and the case treated on the same general principles as an ordinary ovariotomy.

This operation, although under ordinary circumstances feasible enough to any surgeon, is occasionally, however, one that might puzzle the most dexterous specialist to carry into effect. The difficulty of removing a fallopian tube that may possibly be distented to the point of bursting by a pyo-salpinx, without risk in so doing of rupturing the thin tensely-stretched walls of the purulent sac into the peritoneal cavity, is obvious. But where, moreover, as occasionally happens in such cases, the ovaries and tubes are matted together, and to the ligaments, uterus, and other adjoining structures in one inextricable mass by inflammatory exudations and adhesions, that difficulty may be converted into an impossibility in some instances. I have myself had occasion to remove the uterine appendages in several cases, and, as I believe, have generally obtained results neither better nor worse than the average of other ordinary gynæcologists. But, at the same time, I think it not improbable that such other practitioners as well as myself may have sometimes regretted that they had not either operated earlier or that they operated at all in those exceptionally unpromising cases to which I have just referred.

The immediately successful results now obtained from the removal of the uterine appendages in the majority of cases, and the very small mortality consequent on its performance in suitable cases in the hands of skilled specialists, has been proved beyond any possibility of question by the statistics of Mr. Tait's vast series of cases, as well as by those of Dr. Bantock and many other eminent surgeons. Of the ultimate curative results of the removal of the uterine adnexa, however, a less hopeful view is taken by some authorities whose opinions on this subject are no less entitled to consideration. Thus Mr. Alban Doran observes:—"As a rule, oöphorectomy for chronic

disease of the appendages is followed by speedy convalescence. Unfortunately, a permanent cure is not so frequent. Mental symptoms occasionally follow double oöphorectomy. The cases where the stump suppurates are particularly unsatisfactory. Fistulous tracts open, close, and re-open in the abdominal wound for months, discharging thin pus. Such cases find their way to the consulting rooms of others, or to other hospitals than the institution where the operation was performed. The operator hears no more of them, and he or the hospital registrar records them in perfect good faith as 'cures.' A larger minority suffer from a continuance of the pains which preceded the operation, probably on account of intestinal adhesions, or through irremovable inflammatory products which press on nerves. The ligatures certainly set up trouble in some cases."*

Somewhat similar views have been previously expressed by other writers. Thus Dr. H. C. Coe, in the Proceedings of the New York Academy of Medicine, observed:—"There are not a few women now attending the various clinics in New York who have had their ovaries and tubes removed, and yet who complain of precisely the same pain as before; in fact, I can recall cases in which, although the menstrual disturbance is wanting, the pain is more severe than it was before."

I, therefore, think that, without in any way questioning the necessity of these operations in many instances, or the success and small mortality which has attended their performance in the hands of a few distinguished surgeons, the great body of medical practitioners who occasionally must meet and deal with cases of fallopian tube disease, should be very slow to adopt operations the success of which can only be assured by exceptional skill, and that even where the circumstances of the case preclude the possibility of transferring the responsibility to those possessing that capacity, they should, before attempting to imitate their practice, at least fairly and fully try the less heroic yet often successful methods of treatment to which I

*Alban Doran, F. R C. S., "On Treatment of Chronic Diseases of Uterine Appendages" in the Lancet, January 17, 1891.

have already alluded. I have recently had clinical reason to know that the repetition of this recommendation is not superfluous at the present time, having in this hospital within the past couple of sessions met with the effects of its disregard.

A few years ago I brought the increasing frequency in general surgical practice of operations for the removal of the uterine appendages, and by no means only when rendered necessary by fallopian disease, or for uterine myoma, under consideration in papers read before the Obstetric Section of the British Medical Association and elsewhere, to which I have already referred. And as the general accuracy of my opinions on this subject has been confirmed by my more recent experience, I may here recapitulate the views I then expressed, and still hold.

I fully recognize the fact that the first duty of the surgeon is to save his patient's life; and, therefore, if in a case of fallopian tube, or other, disease, this can only be done by immediate removal of the uterine appendages, that this operation should then be at once resorted to. But under any other circumstances it should never be lost sight of that the uterine appendages are as essential to reproductive capacity in women, as are the testes in men, and that by their complete removal the patient is practically unsexed or incapacitated for the chief function and primary object of woman's married life. Nor does it seem to me ever justifiable to perform such operations without the patient's full concurrence and knowledge of the consequences—a rule the propriety of which is obvious, and is now generally recognized and acted on. At the same time, however, it appears to me that the removal of the ovaries and fallopian tubes is even yet occasionally somewhat too readily resorted to in non-organic disease as a possible means of benefiting neurotic and hysterical symptoms. It may, therefore, be well to repeat that other operations and methods of treatment have ere this been for a time as generally accepted; and then, having perhaps been carried beyond their judicious application, have fallen into desuetude. We have, therefore, no guarantee in the present frequency of resort to the removal of the uterine

appendages that the same may not in course of time happen also with regard to these operations which, unquestionably valuable and successful as they have proved in the hands of some eminent surgeons, in cases of absolute necessity should, in my humble judgment, never be lightly regarded as measures of election.

The question of election or necessity I regard as the cardinal point to be decided in considering the expediency of removing the uterine adnexa in the treatment of fallopian tube disease. In many instances, unquestionably, as I have already said, that course becomes an unavoidable necessity, and is then the obvious duty of the surgeon. It should never be forgotten, however, that in probably a no less large number of cases, tubal diseases may also be successfully treated by some of these the much less heroic, but effectual remedial and conservative, measures to which I have referred.

NOTE.—This interesting paper of Doctor Madden is printed in the transactions upon the responsibility of the editor, as a partial compensation to our members for the non-appearance of a paper by the same distinguished author in the proceedings of last year in consequence of the loss of portion of the manuscript.

SECTION ON OPTHALMOLOGY AND OTOLOGY.

ASTHENOPIA—DUE TO MUSCULAR INSUFFICIENCY.

BY H. L. HILGARTNER, M. D.

AUSTIN, TEXAS.

The visual organ, though very accessible to diagnostic investigation and to the application of curative means, is, nevertheless, often the seat of affections of which the nature is still little known, and of which the therapeutics leave much to be desired. The subject, asthenopia, to which I wish to invite your attention, is one which must be considered as still being in its infancy. The nature of this affection is still obscure; the views of various observers are far from being in accord with each other. The object of this paper is chiefly to invite your attention to a subject in opthalmology, the importance of which is underestimated by many specialists. That such a thing as muscular insufficiency exists, I think, is a conceded fact. The question over which there is just now dispute is, "Is there such a thing as muscular asthenopia, *i. e.*, asthenopia persisting after the correction of refraction—errors attributable to a lack of proper muscular balance, or asthenopia occurring from muscular trouble without any refractive errors?" That muscular asthenopia is often dependent upon refraction errors, and either disappears or ceases to give trouble after refraction is fixed, without correcting the muscular error, is quite true. We must not forget that there is a form of asthenopia due to intra nasal disease. Such cases in which the external ocular muscles and refraction are abnormal. Nevertheless, the eye symptoms are dependent upon naso-pharyngeal disease.

Dr. G. E. De Schweinitz reports a number of such cases in the Medical News of April 2d. Noyes, in his recent work, also refers to asthenopia associated with naso-pharyngeal trouble, and cites a case in which all eye symptoms disappeared after the nose trouble was relieved; the glasses, which for a time gave some relief, were also laid aside. We know that asthenopia is often due to uterine disease, hysteria, chronic anæma and other debilitating causes. Yet we do find painful eyes in which the most careful examinations with mydriatics fail to reveal the slightest refraction error, but manifest decided want of muscular balance. Donders, no doubt, was correct in showing the dependence of muscular troubles upon errors of refraction. This applies more to esophoria and exophoria than to defect with the vertical muscles. A little careful thinking, not to say anything of clinical experience, will show you how unscientific it is to talk about muscular asthenopia before refraction is corrected. The cases calling for prisms or tenotomy are, according to my experience, not so very common. They most certainly are not as common as has been reported by some observers.

In a recent paper, Dr. Burnet, of Washington, reports 100 cases taken at random from his case-book; in only 22 of these heterophoria of some kind and degree was present. In most of these no attempt was made to correct the fault, either because the patient was not seen again or because the correction of the other ocular difficulties gave all the relief that was desired. Although the number of cases of asthenopia which require the correction of the muscular fault is comparatively small, we are not justified in discharging patients with heterophoria as incurable because nothing was done for its relief in the not very remote past, when nothing was known of its existence. Since, now, the existence of muscular asthenopia is a settled fact, but the method of cure decidedly unsettled, we should aim to find a cure for this disturber of human comfort. So far as I could learn from the literature on the subject of muscular asthenopia, the theories advanced by different observers as to

the nature of heterophoria are three in number. (The following terms have been employed by Dr. Stevens in muscular anomalies. Ortophoria—a tending of the visual lines to parallelism. Heterophoria—a tending of these lines in some other way. Heterophoria may be divided into: (1) Esophoria—a tending of the lines inward. (2) Exophoria—a tending of the lines outward. (3) Hyperophoria—a tending of the right or left visual line above its fellow. Tendencies in oblique directions may be expressed, as hypo-esophoria, a tending upward and inward; or hypo-exophoria, a tending upward and outward.) The first view is, that there is a congenital feebleness of one muscle as compared with its opposing muscle, this weakness being due either to the fewness of the muscular fibres entering into its formation; or to its faulty attachment to the sclera, being abnormally far from the corneo-scleral junction, or to a want of proper innervation. The second theory is that the development and growth of the ocular muscles have been normal, their attachments perfect and their nerve supply all that could be desired, but that some irritation in or about the eye, or in some organ remote from the eye, excites a spasm tonic in its nature, in one of a pair of muscles, thus destroying their harmonious action. The third theory grants, that congenitally the muscular aparatus of the eyes may be all right, yet it claims that the cause of heterophoria is congenital, in that the maculæ do not occupy corresponding places in the two retinae. This last is the original deduction of G. C. Savage, of Nashville, Tennessee. Neither one of the three theories can be acceptable to all cases; no doubt there are some cases in which the conditions included in all three co-exist. After all the means of relieving this ocular trouble is of most importance. The muscular defect so constantly varies with the patient's constitutional condition, which fact, probably beyond all others, accounts for our difficulties in therapeutics. Since it is often so difficult to arrive at a definite conclusion as to the form and amount of heterophoria, we should always make use of several tests. The simplest test is the single prism test with a lighted candle

at twenty feet. A prism of five degrees or ten degrees with its base vertical is placed before one eye. Two flames appear which ought to be perpendicular to each other. Say the prism is over the left eye, the lower image corresponds to the left eye. If this image appears to the left of the upper as well as below, it is indicative of weakness of the external muscle. If the lower image go the patient's right, this means weakness of the internal muscle. The prism placed so as to bring the two images in a vertical line, measures the insufficiency of the muscles, whether of the externi or interni. The second test is that with the Maddox rod. Let the disc be placed horizontally before the right eye. The patient sees the candle with the left eye and at the same time he sees a streak of light running vertically. If there is horizontal orthophoria the streak will pass vertically through the middle of the candle. If there is esophoria, the streak will go to the right, or if there is exophoria the streak will go to the left of the candle. The condition of the internal and external recti having been determined, the disc must be revolved until the rod comes to the vertical, when the streak will become horizontal, and the streak passing above or below the light will indicate whether the inferior or superior rectus is at fault. The rod test is the most trustworthy, in that it does not show a condition that has no existence. A third test is the Maddox double prism (6 degrees). This is placed before one eye so as to double the candle seen by that eye, both lights being on a straight line with the other. After the double images have been made and properly placed, the fellow eye is uncovered when at once a third light comes into view. If there is orthophoria, this third light will be in the same flame with the other two, and just half-way between them. If the prism is before the right eye, the middle image going to the left would indicate left esophoria, as the left eye is the one that sees the middle light; the middle light going to the right indicates left exophoria. We are not yet in a position to generalize and formulate positive statements concerning the ordering of prisms. Noyes in his recent work states, that in giving prisms the rule may be form-

ulated that the base should be placed toward the image whose position is to be corrected and this corresponds to the weak muscle, provided the physological or funtional action of the muscle is regarded. The apex of the prism like a knife edge indicates the muscle which should be weakened and the base denotes the muscle to be strengthened. The cases of asthenopia calling for operations must be carefully considered, as the operations may have uncertain results. Although the correction by tenotomies is only on trial, the evidence in its favor is constantly accumulating. Since the results following tenotomy have been eminently satisfactory, it should be considered as not only a legitimate operation, but one that under certain circumstances is imperatively demanded.

SECTION ON DERMATOLOGY.

REPORT AND ADDRESS OF THE CHAIRMAN.

R. W. KNOX, M. D.,

HOUSTON, TEXAS.

In making a report on dermatology it is not my intention to take up your valuable time with the views of learned specialists on the probable pathology or etiology of some new or rare disease. I opine, gentlemen, that your minds are so well filled with the practical part of medicine, that you have but little time to take up fanciful sketches of some new or rare disease with which you may never come in contact when there are many other disorders that daily apply for treatment, the cure of which will often baffle the best directed skill. It will be my aim therefore, to take up some of the commoner diseases, and perchance give you what is of the most practical importance in regard to them, whether it be new or old. In carrying out this principal your attention is called to

ECZEMA.

This disease is in many respects, as you all know, a most remarkable one. It is universal in its distribution and eminently protean in its manifestations. It claims its subjects in every land and in every condition of life. The infant at the cradle as well as the gray-haired veteran are alike victims. According to the statistics of the American Dermatological Association, it comprises thirty-three and one-third per cent of all cases of skin disease. We find it the most atypical of all inflammatory disorders. At first a reddened spot, it may be followed in quick succession by all the primary lesions, or the inflammatory action may be checked and become chronic in any one of them. A

typical case is seen when the eruption is marked at its beginning by a moderate degree of inflammation and becomes more intense as the disease advances. On the other hand, if the cause acts quickly or with violence, or the tissues have slight resisting power, we may have as first lesions those which usually appear later in ordinary cases. The tendency is toward a chronic course.

The causes that have been advanced are as numerous and opposite as one could well imagine. It would be foreign to my purpose to mention the many etiological factors, both internal and external, as well as the general conditions thought to influence an outbreak of the disease. According to the German school eczema is a local disease, not dependent upon any constitutional or hereditary vice. With them external treatment is the *sine qua non* for a successful result. The liability to a relapse after apparent cure is attributed to a perverted cell growth and not to a *materies morbi* circulating in the blood.

The French school have always held to the idea that eczema was due to a peculiar diathesis called dartrous, and which is known with us as the rheumic diathesis. The eruption, according to this school, is but the outward manifestation of some internal disorder. The English writers rather favor the French school and lay great stress upon its association with and dependence upon gout, rheumatism, dyspepsia, etc. They strongly favor both external and internal remedies. Some of the celebrated specialists, however, of the old world, have not been content to rest the causation of this universal malady upon such unstable ground. The triumphs of bacteriology have cast so much light in other directions, that it has caused a searching investigation to be made in relation to those diseases of the skin, the etiology of which has been comparatively unknown. Unna, in a paper read before the British Medical Association, makes the startling assertion that eczema is a parasitic disease, and defines it as a chronic parasitic catarrh of the skin, with disquamation, itching, and the tendency when irritated, to result in exudation and marked inflammation, and while admitting that no parasite peculiar to eczema has been isolated, his cultivative experi-

ments upon certain cases reveal a rich dermatological flora! He adds that to some of these fungus elements it is most probable that eczema is due. He furthermore thinks it unwise to deny that a certain disease is parasitic, simply because no pure cultures of a specific organism has been found. He contends that Lister did not wait for pure cultures of the staphylococcus or streptococcus before putting into practice his antiseptic methods. On this line of reasoning he insists that we should not wait for more exact results before adopting the same course in regard to eczema. He thinks the germ is most probably vegetable and flourishes only when it finds the proper soil. The skin is brought into a suitable condition by both local and constitutional influences. Among these are mentioned heredity, gout, rheumatism, constipation, albuminuria, and various other diseases of internal origin. The same condition may also be brought about by local causes, such as heat, cold, and other irritants. As an argument in favor of this theory, he contends that the most successful treatment of eczema is by the use of parasitic remedies. Among a number of lengthy rules for treatment are mentioned the direct and indirect methods. Of the former the germ is to be attacked by parasiticides, while in the latter the soil is to be so modified by internal treatment, that it shall be unfavorable for the development of the specific germ. Both methods are to be used in combination. Another point of interest in this theory is, that the various stages of eczema, as we are wont to call them, are believed to be variations in the specific nature of the disease and to call for its own specific treatment. The subject is one of great practical importance, and much interest will be awakened in the development of this theory. Apropos to the parasitic nature of eczema, may be mentioned a new variety of pathogenic organisms that attack the skin, called psorosperms, and described for the first time by Darier at the International Congress of Dermatologists. This variety of vegetable flora has a much more complex organization than the simple spores and mycelium of the trychophyton or achorion fungus. The psorosperms are round spores with a resisting

cupsule that may open or close. The interior is a proto-plasmic mass made hollow by a vacuum and containing one or more nuclei. These micro-organisms are now thought to be causative agents in molluscum contagiosum, lichen pilaris, Padget's disease, common warts, and in some superficial forms of epithelioma. It is evident that a fierce hunt is now being made for bacteria in the dermatological field. A celebrated Spanish author asserts that antisepsis forms one of the most important means of treatment in skin diseases at the present time. Impetigo, ecthyma, furuncle, erysipelas, erythema multiforme, lupus, pemphigus, and a number of other cutaneous disorders are recommended to this treatment—generally speaking a sublimate, salicilic, or boric wash is used, and the lesions are then dressed with resorcin, ichthyol or an alcoholic solution of naphthol.

In a late number of the Journal of Cutaneous and Genito Urinary Diseases an article has appeared from Drs. Stelwagon and Hutch on mycosis fungoides. They have made an exhaustive study of this rare and interesting disease. Micro-organisms are found which are believed to be micrococci.

The treatment of morbid and malignant growths, and especially those thought to have a germ origin by hypodermic injections of pyoktanin or methyl-violet, has created some attention during the past year. This dye, which has the peculiar property of staining bacilli has long been used for microscopic investigations. Its use on the living body was suggested on account of this action. A 4 per cent solution is used by injection with a hypodermic needle entirely around and into the morbid growth. Unna and Brooks claim that sycosis non-parasitical is a misnomer and should be discarded, as all forms of sycosis contain a living germ and are best treated with parasiticides.

Alopecia areata has also been the subject of much discussion of late as regards its cause, whether parasitic or non-parasitic. Morrow believes in its parasitic nature, although the consensus of opinion favors the opposite view.

Dr. Duncan Bulkly has lately written an article in the Journal of Cutaneous Diseases on the use of carbolic acid in this disease. Briefly stated, the treatment consists in the application of pure carbolic acid, well rubbed into the hairless spots. Usually one but never more than two applications are made; within a few weeks a growth of fine downy hair makes its appearance in every case so treated and eventually the baldness disappears. Another treatment lately advocated by a French author, is the application of iodine and collodion. Satisfactory results are claimed for this procedure. In the treatment of psoriasis no remedy has been able to supersede chrysophanic acid. The formula given by Fox is an admirable one and answers every indication, viz:

Chrysophanic acid	10 parts.
Salicylic acid	10 parts.
Ether	15 parts.
Flexible collodion	100 parts.

This solution dries quickly and will not cause a dermatitis or stain the clothing. The use of iodoform in burns has lately found much favor on account of its anæsthetic and antiseptic properties. It also favors the growth of healthy granulations and to some extent prevents the deformity likely to result from contracted scars. Where it is necessary to treat a large surface, iodoform gauze may be used; over this is placed oil silk covered by absorbent cotton and held in place with a bandage. Aristol, a new combination of iodine and thymol may be used as a substitute for iodoform. Its chief advantage is in the fact that it is non-toxic and comparatively odorless. It is a remedy of value in leg ulcers and syphilitic sores. Its value as a dressing for skin lesions is variously estimated by different observers. It is increasing in popularity.

The use of sulphur fumigation in scabies, sulphur oils and ointments in seborrhoea, hyperidrosis of the hands and feet, and in chronic eczema of children, has lately come into great favor. In the treatment of acne rosacea it is a remedy of great excellence. I have found the following rules valuable as a

guide to the treatment of this disease when in the pustular stage.

First—The face should be steamed every night by holding it over a basin of hot water for a few minutes. Second—The skin should then be well rubbed for five or ten minutes with soap and flannel or a soft nail brush where the skin will bear it. The soap should then be sponged off with warm water. Third—When the face has been dried, a lotion composed of

℞ Sulphur . . . . . one drachm.
Glycerine . . . . two drachms.
Spir. Wine . . . . . one ounce.
Lime Water, Rose Water } aa, . three ounces.

should be freely applied and allowed to remain all night. If the skin be greasy, a little ether added to the lotion will be of service. For internal treatment sulphide of calcium may be taken in one-fourth grain doses three times a day, and gradually increased to two grains daily taken for weeks or months.

Two cases of favus in children have lately come under my observation, contracted by a pet kitten that had made its way into the household. Spots resembling ring worm first made their appearance upon the face, but the characteristic yellow cups were soon found on the scalp. The hair was not extracted and it was several months before a cure was effected. A twenty per cent solution of hyposulphite of sodium greatly hastened the cure, and had a much more beneficial effect than any other remedy used.

I have lately had in charge four cases of acute pemphigus, occurring in children of one household but of two families. The mother of the child first afflicted claims that the disease was contracted from a neighbor's child who had a similar eruption. There was no constitutional disturbance. The blisters varied in size, some not being larger than a pin's head, while the majority measured from one-quarter to one-half inch in diameter. They came in successive crops and broke easily. The body was completely covered, with the exception of the

palms of the hands and soles of the feet. The disease lasted about three weeks. These cases would indicate that pemphigus was of zymotic origin and clearly contagious, an opinion held by some authorities.

I do not consider it worth your time and atenttion to mention in detail the various new and as yet comparatively untried remedies. There are few specifics, and a cure is more often dependent upon the manner in which the remedy is used rather than upon any specific value it may possess. Geo. Fox in his late work on skin diseases makes the assertion that for example, out of the hundreds of remedies used for eczema, the majority of cases can be cured by sweet oil and soft soap. The oil to remove any crusts that may be present, soothe the inflamed part, alleviate the itching, protect the denuded corium from the desicating influence of the air and the irritative action of the water. Soap frictions will free the epidermis from irritative debris, and in chronic cases change the character of the lesions to a more acute form.

In closing this review on the progress of dermatology, I am aware that some new remedies have been omitted, due not only to the fact that my experience with them has been limited, but because their action in the hands of the few who have tried them has not been sufficiently encouraging to warrant their recommendation.

PRESIDENT'S ADDRESS.

"MEDICAL PROGRESS."

W. H. WILKES, M. D.,

WACO, TEXAS.

In obedience to the behest of an imperious custom, it is made the duty of the retiring president of this association to come before you to-night with an address, which should contain something of interest both to the members of the profession and to those of the non-medical public who have honored and complimented us by their presence on this occasion.

The great difficulty of selecting a medical theme that shall be interesting alike to the layman and the professional can only be appreciated by one who, placed in like position, has been ground between the upper and nether mill-stone of doubt and indecision. After much reflection, we have decided to christen our offering

"MEDICAL PROGRESS."

Reflecting upon the character and ability of those able medical gentlemen who have, for more than a score of years, successively filled this position, and whose scholarly and eloquent addresses have, from year to year, adorned the pages of your published "proceedings," we approach this task with diffidence and trembling, mistrusting our ability to do justice to this association, or to meet the expectations of this cultured audience; wondering if we shall be able, by any word or thought, to reach a chord in the heart of the most lenient medical brother which has, in former years, vibrated to the touch of other and abler hands.

Thirty-five years ago, in the early professional life of your humble speaker, the armament of a physician and the methods of examination were few and simple indeed. The pulse, the tongue, the temperature as inaccurately judged by the touch and the varied expressions of countenance were almost the only diagnostic guides. The young physician of today stands on a higher plane, and his armament is vastly more elaborate and comprehensive. He must not only be able to examine the tongue, and feel the pulse, and distinguish normal and abnormal thoracic sounds by the ear, but he must skillfully handle the stethoscope, the otoscope, the laryngoscope, the ophthalmoscope and now the gastroscope, and all the other "scopes" that come within the scope of his knowledge; besides selections from the innumerable instruments that compose the diagnostic armament of the skilled physician at the present day. He goes armed with a thermometer that unerringly indicates the temperature of his patient, and is learned in the use of hypodermic medication. He should understand the value and use of electrical currents, and be skilled in the management of the microscope, so as to be able to distinguish the cellular appearance of abnormal tissues. He should be able to recognize, stain, and classify the various bacteria that are so injurious to the human system.

Verily, the man who, in this day, undertakes to qualify himself for the general practice of medicine, must begin early and work industriously, assiduously and untiringly; and so also must the practitioner who expects to keep his head within breathing distance of the top waves of scientific medical progress. It has been well said that he who ceases to gain knowledge is always losing it, and the physician who is not a student grows less and less competent to discharge his duties and meet the important responsibilities that rest upon him with every passing year. Some may say that the teachings of experience are the only safe guides to success, others that constant scientific research is the royal road to usefulness, but it is the proper and judicious combination of both that leads to the acme

of our highest ambition, and has lifted some men above the ranks and made them priests and kings in the profession of medicine.

In this matter of diagnosis, during the last quarter of a century, most wonderful progress has been made. We now literally look within the human body and scrutinize its wonderful anatomical relations almost as the artisan looks into and examines the mechanism of a watch. The living retina of the human eye can be seen and we can view the pictures that in such rapid succession are daguerreotyped upon its sensitive surface. With Garcia's laryngoscope we examine the play and the mechanism of the vocal chords, the living strings of that most wonderful and most harmonious of all musical instruments, the human voice. We call that subtle and mysterious servant of mankind, electricity, to our aid in lighting up the hidden recesses of the human body, and we make the same power our agent in removing such pathological growths and abnormal excrescences as may meet our view.

In view of these improved methods of diagnosis, the question pertinently presents itself, "Has the profession been proportionately benefitted by these things and have we made corresponding improvement in our methods of treatment?" We emphatically answer *yes*. In this rapidly moving age, when progress and improvement are the watchwords of the hour, when broad schemes of charity and philanthropy, not dreamed of in other ages, are being put into active operation, medicine lags not behind in the race, but firmly keeps step to the music of progress. This is an age of medicine brighter and more promising than any which have gone before, and yet, from our present vantage ground, we gaze over into a promised land to be occupied at least by these younger men—a land filled with brilliant possibilities and gradually rising in elevation up to the milenial glory of medicine.

In illustrating what has been accomplished by medicine, we can, in this address, take only a hurried and cursory glance.

Who can estimate the indebtedness of the general public to the medical profession for what has been accomplished and is still being done to prevent and control epidemics of disease. Most of these epidemics, which were formerly so much dreaded, are now held in check, if not completely eradicated, by improved methods of isolation, disinfection and fumigation. Even cholera has been controlled by an educated quarantine, strict medical inspection, and the sanitary improvement or surrounding conditions. The epidemics of plague, the description of which by ancient historians chills the blood with horror at the dismal recital, have been wiped from existence for more than half a century, and mankind no more lives in dread of this terrible scourge.

Thanks to the observation and wisdom of the immortal Jenner, smallpox has been robbed of its terror and no one need suffer from this loathsome disease. Two or three years ago, when we heard that cholera was again sweeping westward from its incubating fields in far away Asia, the minds of all of us were filled with the direst apprehensions that our own loved America would be soon scourged by this fell destroyer and our loved ones swept away by hundreds and by thousands; but applied medical science has, by rigid quarantine, so hedged in this mighty foe that our apprehensions are allayed and we now hope to escape altogether.

A few years ago, each recurring summer brought with it to our loved Southland the yellow fever scare; and when the first cases were reported, how anxiously we counted the days and weeks which must elapse ere a killing frost should annihilate the relentless destroyer. Annually our Southern ports were scourged by this disease and cities far in the interior were often desolated by the yellow demon. Now an educated medical officer, the saving angel of health, stands, with drawn sword, at every port of entry and triumphantly announces:—"Hitherto shalt thou come and no further," and the threatened millions of our people rest peacefully under such protection.

Sometimes, in speaking of the successes achieved by medicine, we may be over sanguine, but the discovery that we have been so should only stimulate to renewed exertion and more watchful care.

In March of last year, Prof. T. Gaillard Thomas (to whom we are indebted for more than one thought in this address), made the assertion that "typhus fever had been swept out of existence as thoroughly and surely as are today the three great moral blots upon the fair escutcheon of civilization, slavery, duelling and polygamy." And he was right, for duelling and polygamy occasionally and sporadically crop out to be seized and punished by the strong arm of the law. In less than one year from Prof. Thomas' address, typhus fever again lifted its fearful head in the densely populated city of New York; and for a time, great was the alarm and the consternation, threatening a panic. But medical men and medical skill and appliances were ready for the emergency, and soon throttled the invading monster. Fortunately, most of the infected were Jewish refugees from Russia, fleeing from famine and despotism, and being still in charge of the officers of the United Hebrew Charities, and supported by the funds of the grand charity of Baron Hirsch, they were easily found and isolated. Those who had been exposed before the disease was discovered were either quarantined or kept under constant surveilance, so that again medical skill and sanitary knowledge triumphed. We learn from an article by Dr. Cyrus Edson that while there were 106 cases among the passengers of the ill-fated "Massillia," only twenty-four citizens of the city were infected with the disease. This dread disease was brought from the famine-stricken districts of Russia, but coming to a city that is under careful and scientific medical supervision and watchfulness, it failed in gaining a sure foot-hold and our land was saved from an epidemic of this fatal disease.

Thus we see that the lives and the well-being of our people, public health and human existence, are being, during each passing year, more and more committed to the hands of edu-

cated medical men, and the people are trusting more and more that, by wise councils and experimentally demonstrated methods, we will protect them from the devastation of preventive diseases by the application of the teachings of sanitary science. The nation is being at last aroused to the benefits to be derived from preventing and crushing out diseases, and a bill for the establishment of a Bureau of Public Health is now before the congress of the United States. This bill was introduced by Senator Sherman in response to a memorial from the American Medical Association. Let us hope that such a bureau may be created, and may be kept in the hands of educated physicians and sanitarians, and not be gobbled up by greedy politicians for their own selfish ends.

We endorse our friend, Dr. Bennett, in the Texas Sanitarian, in saying: "For our part, we think the public health interest of this great republic is of sufficient importance and extent to warrant being represented by an officer in the cabinet, as worthy at least of being organized into a distinct department as that of agriculture or livestock." Is not the health and are not the lives of our neighbors, our wives and our children more important than our wheat fields, our corn bins and our blooded cattle?

Now let us glance briefly at a few other points of medical progress.

Modern therapeutics keeps up with, perhaps keeps in advance of other branches of the healing art. New remedy after new remedy follows each other, nay, they come in brigades and squadrons, with such electrical rapidity that the head grows dizzy over the "antis" and the "ides," the innumerable prefixes, suffixes and termini of the names with which these remedies are christened, until the busy physician and surgeon fails to keep up with the procession and he often, perhaps wisely, turns to the older remedies whose efficacy has been tested in the crucible of experience. The advances in surgery have also been wonderful and marvelous.

Thanks to Lister, the greatest advances have been made in the domain of antiseptic surgery. The human abdomen, for ages held sacred from surgical intrusion, has, since McDowell's first victory of long ago, now become the field of the surgeon's greatest triumphs. Thanks to cerebral localization and Lister's antisepsis, the human brain, the very sanctum sanctorum of the human body, has been invaded by the daring hand of the surgeon. Tumors have been excised, abscesses have been emptied, brain injuries have been repaired and valuable lives saved where death before seemed inevitable. But the most important advances in medical knowledge made during the last quarter of a century have resulted from amazing discoveries in what Dr. Dumas calls the "third realm" and another styles "the border land between the animal and vegetable kingdoms."

In this "third realm" the microscopist has discovered myriads of heretofore invisible beings, styled bacteria, some of which are the true scavengers of the human system and are essential to our well-being, while others, upon the least violation or neglect of the laws of health, swarm into the system bringing punishment, disease and, it may be, death. These bacteria surround us on every hand. They are in the food we eat, the water we drink, and the air we breathe. They multiply at a rate that is truly incredible, and, so great is their power in the work and activities of life, that they have been called "the masters of the world."

Most varieties are fortunately quite harmless to the human system, while others, styled pathogenic germs, produce mischief and disease. In shape they are rod-like, thread-like, spiral and globular, and the mind of the physician is confused by the multitude of prodigously long names which have been given them; for instance, the round micrococci, the rod-like bacilli, etc.; but this confusion does not make us fail to recognize the greatness and importance of these discoveries. Indeed we can scarcely conceive a study more important to our race, or more facinating to the student, than that comprised in this "new world of the invisible." But we are still in the mere

vestibule of this new temple of knowledge, and, wrapped in wonder at what we have already seen, with curious and unsatisfied gaze, we eagerly look into the dim aisles before us and expect grander results in the near future.

With Prof. Burdon Sanderson, we exclaim that it requires "no prophetic vision to foresee that we are on the very threshold of discoveries in medicine such as will eclipse in their splendor all that have preceded them."

You will doubtless say that very little has been done in the direction of destroying and stamping out these microbes—that Koch's tuberculin was a failure—and that we have as yet derived small benefit from these discoveries. Let us not be discouraged by one failure, but be encouraged by the fact that these discoveries are on the right line; that we certainly are reaching the true pathogeny, the very origin and bases of disease itself; that the strongholds which contain the mysteries of health and disease and of life and death, are at last being conquered. Koch may have failed in his parataloid, but all honor is due him as one of the grandest discoverers and most untiring workers of the age. Ten years ago he discovered the tucercle bacillus, and has since discovered the bacillus of cholera. He has also discovered, among other things, and has proven, that the living germs of consumption, when exposed to sunlight, soon loose their vitality, and thus justifies us in prescribing open air and sunshine for our consumptive patients, and verifies the old adage that "a sunbeam is worth more than drugs."

Again under Koch's guidance, experimenters in Germany have discovered that "the spread of consumption is largely due to the fact that the sputum of consumptive patients, which always contain bacilli, floats about in the air after being dried and pulverized and is inhaled by healthy people." In the sanitation of the future, some of you may live to see consumptives permitted only to traverse our streets or travel our public highways when they carry with them some receptacle for their infected expectoration. But how else are we to be delivered from imminent bacterial annihilation?

Heat and cold as well as sunlight destroy these bacteria. Again, the waste materials thrown off by these bacteria, called ptomaines, are destructive of the life of the microbe itself, and these bacteria thus become suicides, and destroy themselves.

Again, it is now being submitted to proof that there is an antagonism between the germs of different diseases, and in some instances they destroy each other. Again, imparting a disease in a modified form exhausts the material in the body upon which the peculiar microbes of this disease feed, "lays waste to the territory," and thus exempts the system from future attacks of that disease.

Again, Wooldridge produces immunity from anthrax by injecting tissue fibrinogen. The Drs. Klemperen, of Germany, claim that every nutrient medium in which the pneumococcus has been cultivated, will, if inoculated, render an animal insusceptible to pneumonia.

Again, there are contained in the blood of higher animal certain cells called phagocytes, supposed by some to be identical with the white corpuscles of the blood, which are endowed with the power of independent movement, and which devour and digest all microbes with which they come in contact. They have been termed the "free-lances" of the body, the "police" of the blood, and the guardians of the system. So long as these "free-lances" are victorious, and "hold the fort" against the intruders the body remains in a healthful condition, but, when they are overpowered, these deadly parasites take possession of the citadel and disease and death ensue. Looking into these things, new thoughts and new ideas so crowd into the mind that the brain throbs and quivers with expectant curiosity, "as the magnet vibrates in the grasp of the induction coil."

Heretofore we have exulted most in our past history, and have relied too much on the anxioms and truths handed down to us by our predecessors, the fathers in medicine, but now as was recently said of education, medicine "like a slow-moving, ponderous weather vane has swung around and points straight into the future."

Prof. Thomas declares that if he had the power of accomplishing his wishes, next to the universal abolition of alcohol, he would "choose the power of stamping out forever those contagious diseases which fill our graves with curly heads and dimpled cheeks, and our homes with sorrow that knows no comforting."

He makes the prediction that the next century will see the extinction of scarlet fever, diptheria, and the whole host of contagious maladies. Prof. Wood, of Nashville, in the presence of a recent class of medical graduates, made the following prediction: "Gentlemen, within the sound of my voice shall live to see cancer, consumption, and other hitherto incurable diseases relieved by treatment." Then today we bare our heads and turn our faces to the coming light of the future, and confidently hope that a new era in medicine may be ushered in, even before the close of this rapidly waning century. We would not disparage either the past or the present of medicine, but, glorious as she has been in her historical past, mighty and grand as she stands in her educated present, we feel now to stand upon the beginning of a more mighty and a more glorious future. Deep and untiring experiment and research are boring down into the artesian depths of medical wisdom, and perennial streams of knowledge will gush forth to water aud replenish the mind of every physician who remains a student, and give him a deeper insight into, and a keener appreciation of the mysteries which surround his noble profession. Noble profession, indeed, it is! Its votaries, by their lives of devotion to duty, cultivate a spirit of tolerance, broadness, and a love of the higher and better attributes of man. From year to year, as the science of medicine progresses, the public is learning more and more to appreciate the grandness and usefulness of our profession, and they are also becoming more and more imbued with the truth that "prevention is better than cure." The ideal, popular physician of the future will be the one who best knows how to prevent disease.

How much more grand will be his position than that of the doctor who simply ministers to the relief of suffering after disease has fastened itself upon the system? Yet in spite of all we have said of medicine and its devoted and self-sacrificing votaries, there are those in every community, in some perhaps there is a majority, who prefer to encourage charlatans and quacks to educated medical men; who patronize the "Pathies," the "christian science" craze and the "faith cure;" who spend their dollars with the peripatetic vendor of patent medicines who comes, heralded by the blatent music of a brass band, and embellishes his seances with second-class negro minstrelsy.

Dr. John W. Draper once said of these charlatans: "They will contiuue to thrive so long as there are weak-minded and shallow men to be deluded, and vain and silly women to believe." McCaulay asserts that "there is no quackery in medicine, religion or politics which may not impose, even on a powerful mind, when such mind is disordered by pain or fear." Prof. Loomis aptly says that ours is "a struggle for the supremacy of intellectual power and broad culture over weakness and charlantanism;" and, again, that there is "no place in the broad field of scientific medical inquiry for the would-be medical man who talks of the potential power of infinitesimal abstractions and the so-called scholastic illusions." Thank heaven, the wise, the cultured and the thinking are appreciative of the educated men of the regular profession.

We may expect some to scoff and sneer at educated, refined medical gentlemen. So the clerical cohorts of Rome scoffed and derided when Galileo declared that the earth moved instead of the sun. So Jesus of Nazareth was derided while relieving the sufferings of a sinful world.

One of the grand things said of the Christ while on earth was that "*He healed the sick.*" He wandered up and down the hills and vales of Galilee and Judea, and our noble profession, (we speak it reverently) in humble imitation, travels up and down the hills and vales of this old earth, healing the sick, opening the eyes of the blind, unstopping the ears of the deaf, making

the lame walk, and, everywhere ministering to the poor and the suffering, often without the expectation of a fee or the hope of an earthly reward.

The broad charities of the medical profession exceed, in the aggregate, those of any profession on earth; and its votaries spend their weary days, and often their long, vigilant nights, among the diseased, the suffering and the dying, and thus transform their lives into missions of mercy, benevolence and grand deeds.

May such be our lives, trusting that

"Whatever fate to us is given,
All, when day is done, again shall meet,
And at nightfall, 'neath the stars of heaven,
Shall be gathered at our Father's feet."

CODE OF MEDICAL ETHICS

OF

THE TEXAS STATE MEDICAL ASSOCIATION,

ALSO,

LIST OF DECEASED MEMBERS

AND

AUXILIARY ASSOCIATIONS IN AFFILIATION.

CODE OF MEDICAL ETHICS.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

ARTICLE I.—*Duties of Physicians to their Patients.*

SECTION 1. A physician should not only be ever ready to obey the calls of the sick, but his mind might also be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring because there is no tribunal, otherwise than his own conscience, to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impression of the importance of their office, reflecting that the ease, the health and the lives of those committed to their charge depend upon their skill and fidelity. They should study, also, in their deportment, so as to unite *tenderness* with *firmness*, and *condescension* with *authority*, as to inspire the minds of their patients with gratitude, respect and confidence.

SEC. 2. Every case committed to the charge of a physician should be treated with attention, steadiness and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed and the familiar and confidential intercourse to which physicians are admitted in their professional visits should be used with discretion, and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services; none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character, observed during professional attendance should ever be divulged by the physician, except when he is imperatively required to do so. The force and necessity of this obligation are, indeed, so great that professional men have, under certain circumstances, been protected in their observance of secrecy by courts of justice.

SEC. 3. Frequent visits to the sick are, in general, requisite, since they enable the physician to arrive at a more perfect knowledge of the disease —to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the

authority of the physician, and render him liable to be suspected of interested motives.

SEC. 4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming, when executed by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquility of the most resigned in their last moments. The life of a sick person can be shortened, not only by the acts, but also by the words or manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

SEC. 5. A physician ought not to abandon a patient because the case is deemed incurable, for his attendance may continue to be highly useful to the patient and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance under such circumstances would be sacrificing to fanciful delicacy and mistaken liberality that moral duty which is independent of, and far superior to, all pecuniary consideration.

SEC. 6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy and more enlarged views in practice.

SEC. 7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never to be neglected. His counsels, or even remonstrances, will give satisfaction, not offense, if they be proffered with politeness, and evince a genuine love of virtue accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ARTICLE II.—*Obligations of Patients to their Physicians.*

SECTION 1. The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties toward the community, and who are required to make so many sacrifices of comfort, ease and health for the welfare of those who avail themselves of their

services, certainly have a right to expect and require that their patients should entertain a just sense of the duties which they owe to their medical attendants.

SEC. 2. The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation do mankind rely on the skill of an untaught artist; and in medicine, professedly the most difficult and intricate of all the sciences, the world ought not to suppose that knowledge is intuitive.

SEC. 3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should also confide the care of himself and family, as much as possible, to one physician, for a medical man who has become acquainted with the pecularities of constitution, habits and predispositions of those he attends is more likely to be successful in his treatment than one who does not possess that knowledge. A patient who has thus selected his physician should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is of still more importance that he should apply for assistance in the forming stage of violent diseases. It is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

SEC. 4. Patients should faithfully and unreservedly communicate to their physician the supposed cause of their disease. This is more important, as many diseases of mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser; he should always bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feeling of shame or delicacy to prevent their disclosing the seat, symptoms and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

SEC 5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease, even as relates to his actual symptoms. He will convey much more real information by giving clear answers to interrogatories than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business, nor the history of his family concerns.

SEC. 6. The obedience of a patient to the prescriptions of his physician should be prompt and explicit. He should never permit his own crude

opinions as to their fitness to influence his attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink and exercise. As patients become convalescent they are very apt to suppose that the rules prescribed for them may be disregarded, and the consequence, but too often, is a relapse. Patients should never allow themselves to be persuaded to take any medicine whatever that may be recommended to them by the self-constituted doctors and doctresses who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their subscriptions appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

SEC. 7. A patient should, if possible, avoid even the friendly visits of a physician who is not attending him—and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the direction prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results.

SEC. 8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reason for so doing.

SEC. 9. Patients should always, when practicable, send for their physician in the morning, before his usual hour for going out; for by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

SEC. 10. A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for these are of such a character that no mere pecuniary acknowledgment can repay or cancel them.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER AND TO THE PROFESSION AT LARGE.

ARTICLE I.—*Duties for the Support of Professional Character.*

SECTION 1. Every individual on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members; should avoid all contumelious and sarcastic remarks relative to the faculty as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

SEC. 2 There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical; and to attain such eminence is a duty every physician owes alike to his profession and to his patients. It is due the latter, as without it he can not command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct and moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional should be unprepared, a steady hand, an acute eye and an unclouded head may be essential to the well-being, and even to the life, of a fellow-creature.

SEC. 3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbill, inviting the attention of individuals affected with particular diseases; publicly offering advice and medicine to the poor gratis; or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations; to boast of cases and remedies; to adduce certificates of skill and success; or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

SEC 4. Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument or medicine, or to dispense a secret *nostrum*, whether it be the composition or exclusive property

of himself or of others. For, if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and, if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them.

ARTICLE II.—*Professional Services of Physicians to Each Other.*

SECTION 1. All practitioners of medicine, their wives and their children, while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or anyone who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment and produce timidity and irresolution in his practice. Under such circumstances medical men are peculiarly dependent on each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously, as such unasked civility may give rise to embarrassment or interfere with that choice on which confidence depends. But if a distant member of the faculty, whose circumstances are affluent, requests attendance, and an honorarium be offered, it should not be declined, for no pecuniary obligation ought to be imposed which the party receiving it would wish not to incur.

ARTICLE III.—*Of the Duties of Physicians as Respecting Vicarious Offices.*

SECTION 1. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes requires him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglects his business in quest of pleasure and amusement, he can not be entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy, without awarding to the physician who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

ARTICLE IV.—*Of the Duties of Physicians in Regard to Consultation.*

SECTION 1. A regular medical education furnishes the only presumptive evidence of professional abilities and requirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations, the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practice from some medical board of known and acknowledged respectability, recognized by this association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner, or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of an accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology and organic chemistry.

SEC. 2. In consultations, no rivalry or jealousy should be indulged. Candor, probity and all due respect should be exercised toward the physician having charge of the case.

SEC. 3. In consultations, the attending physician should be the first to propose the necessary questions to the sick, after which the consulting physician should have the opportunity to make such further inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the one first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions or prognostications* should be delivered which are not the result of previous deliberation and concurrence.

SEC. 4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinion in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment as any subsequent unexpected change in the character of the case may demand. But such variation, and the reasons for it, ought to be carefully detailed at the next meeting in consultation. The same privilege belongs, also, to the consulting physician, if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made by him at the next consultation.

SEC. 5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is gener-

ally practicable, for society has been considerate enough to allow the plea of professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But, as professional engagements may sometimes interfere, and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will, of course, see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion in writing and under seal, to be delivered to his associate.

SEC. 6. In consultation, theoretical discussion should be avoided, as occasioning perplexity and loss of time; for there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

SEC. 7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants, and they must equally share the credit of success, as well as the blame of failure.

SEC. 8. Should any irreconcilable diversity of opinion occur when several physicians are called on to consult together, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician It may, moreover, sometimes happen that two physicians can not agree in the views of the nature of the case and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dictates of judgment. But, in the event of its occurrence, a third physician should, if practicable, be called to act as umpire, and if circumstances prevent the adoption of this course, it must be left to the patient to select the physician in whom he is most willing to confide. But, as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further deliberation in the consultation, or participation in the management of the case.

SEC. 9. As circumstances sometimes occur to render a special consultation desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases should sedulously guard against all future un-

solicited attendance. As such consultations require an extraordinary portion both of time and attention, at least a double honorarium may be reasonably expected.

SEC. 10. A physician who is called upon to consult should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as it can be consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities which are too often practiced by the dishonest for the base purpose of gaining applause or ingratiating themselves into favor of families and individuals.

ARTICLE V.—*Duties of Physicians in Cases of Interference.*

SECTION 1. Medicine is a liberal profession, and those admitted into its ranks should found their expectotions of practice upon the extent of their qualifications, not on intrigue or artifice.

SEC. 2. A physician, in his intercourse with a patient under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made—no disingenuous hints given relative to the nature and treatment of his disorder, nor any course of conduct pursued that may, directly or indirectly, tend to diminish trust reposed in the physician employed.

SEC. 3. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the care of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

SEC. 4. A physician ought not to take charge of, or prescribe for, a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer desired. Under such circumstances no unjust and illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief. As many diseases are naturally protracted, the want of success, in the first stage of

treatment, affords no evidence of a lack of professional knowledge and skill.

SEC. 5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

SEC. 6. It often happens in cases of sudden illness or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances courtesy should assign the patient to the first who arrives, who should select from those present any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

SEC. 7. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

[The expression "patient of another practitioner" is understood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sickness, or departure from home of the latter, or who may have called for his attendance during his absence or sickness, or in any other manner given it to be understood that he regarded the said physician as his regular medical attendant.]

SEC. 8. A physician, when visiting a sick person in the country, may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no further than is absolutely necessary with the general plan of treatment; to assume no future direction unless it be expressly desired; and, in this last case, to request an immediate consultation with the practitioner previously employed.

SEC. 9. A wealthy physician should not give advice gratis to the affluent, because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively benevolent one, and it is defrauding, in some degree, the common funds for its support when fees are dispensed with which might justly be claimed.

SEC. 10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first sent for.

ARTICLE VI.—*Of Differences Between Physicians.*

SECTION 1. Diversity of opinion and opposition of interest may, in the medical, as in other professions, sometimes occasion controversy, and even contention. Whenever such cases unfortunately occur, and can not be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians, or a *court-medical.*

SEC. 2. As peculiar reserve must be maintained by physicians toward the public in regard to professional matters, and as there exist numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which can not be understood or appreciated by general society, neither the subject matter of such differences nor the adjudication of the arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit to the faculty.

ARTICLE VII.—*Of Pecuniary Acknowledgments.*

Some general rules should be adopted by the faculty in every town or district relative to pecuniary acknowledgments from patients, and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ARTICLE I.—*Duties of the Profession to the Public.*

SECTION 1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should, also, be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene and legal medicine. It is their province to enlighten the public in regard to quarantine regulations; the location, arrangement and dietaries of hospitals, asylums, schools, prisons and similar institutions; in relation to the medical police of towns, as drainage, ventilation, etc., and in regard to measures for the prevention of epidemics and contagious diseases; and, when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

SEC. 2. Medical men should, also, be always ready, when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice on subjects strictly medical—such as involve questions relating to sanity, legitimacy, murder by poison or other violent means, and in regard to the various other subjects embraced in the science of medical jurisprudence. But in these cases, and especially where they are required to make a *post mortem* examination, it is just, in consequence of the time, labor and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

SEC. 3. There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to the performance of such good offices. Poverty, professional brotherhood and certain of the public duties referred to in the first section of this article, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives, or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary

acknowledgment. But to individuals in indigent circumstances, such professional service should always be cheerfully and freely accorded.

SEC. 4. It is the duty of physicians, who are frequent witnesses of the enormities committed by quackery, and the injury to health, and even destruction of life, caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and impostors. Physicians ought to use all the influence which they may possess, as professors in colleges of pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ARTICLE II.—*Obligations of the Public to Physicians.*

SECTION 1. The benefits accruing to the public, directly and indirectly, from the active and unwearied beneficence of the profession, are so numerous and important that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumptions of ignorance and empiricism—to afford every encouragement and facility for the acquisition of medical education—and no longer to allow the statute books to exhibit the anomaly of exacting knowledge from physicians, under liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it.

NOTE.

[Omission from the Minutes.]

The stenographer failed in his report of the minutes to mention that Dr J M. Keller, of Hot Springs, Ark , offers a gold medal as long as he lives to the student in the graduating class of the Medical School of the University of Texas who stands the best examination in the department of Obstetrics and Gynecology.—EDITOR.

OFFICERS OF THE TEXAS STATE MEDICAL ASSOCIATION SINCE ITS ORGANIZATION AT HOUSTON, TEXAS, JUNE 15, 1869.

No. of Session	Date of Meeting	Place of Meeting	Presidents	First Vice-Presidents	Second Vice-Presidents	Third Vice-Presidents	Secretaries	Treasurers
1	June, 1869	Houston	T. J. Heard.....	R. H. Jones	D. R. Wallace...	.....	A. Connell	F. Hassenberg
2	June, 1870	Houston	R. H. Jones	R. W. Lindsay ..	W. J. Locke	.....	A. Connell	W. P Riddell
3	June, 1871	Houston	D. R. Wallace...	L. Hudspeth	J. T. Norris.....	.....	A. Connell	W. P. Riddell
4	June, 1872	Houston	R. T Flewellen.	J. A. McQueen ..	D. F. Stuart	.....	A. Connell	J. Larendon
5	April, 1873	Waco.....	D F. Stuart.....	H. W. Brown ...	J M. Morrison ..	.....	S O. Young.....	J. Larendon
6	April, 1874	Dallas.....	A G. Clopton....	T. D. Wooten....	M. H. Oliver	.....	W. A. East	J. Larendon
7	April, 1875	Austin	H. W. Brown	L. R. Mayfield ..	M. A. Taylor	R H. Harrison.	W. A. East	J. Larendon
8	April, 1876	Marshall.....	R. H. Harrison..	John H. Pope...	T. W. Wiley.....	W. H. Park.....	W. A. East	J. Larendon
9	April, 1877	Galveston.....	W. D. Kelley....	Geo. Cupples....	R.M.Swearingen	J. H. Sears.....	W. A. East	J. Larendon
10	April, 1878	San Antonio..	Geo Cupples ...	R. W. White	W. E. Saunders.	J. T. Field	W. A. East	J. Larendon
11	April, 1879	Sherman.....	John H. Pope...	S. F. Matchett ..	S. F. Starley	S. Eagan	W A. East	J. Larendon
12	April, 1880	Brenham	A. R. Kilpatrick	R.M.Swearingen	E. J. Beall	O. H. Seeds	R H L. Bibb ...	J. Larendon
13	April, 1881	Waco.....	Ashbel Smith...	S. F. Starley	J W McLaughlin	J. A. Summers..	R. H L. Bibb ...	J Larendon
14	April, 1882	Fort Worth ...	S. F. Starley	W. P. Burts	W. A. Adams ...	Joe S. Wills	W. J. Burt	J. Larendon
15	April, 1883	Tyler.....	A. P. Brown	T. H. Nott	J. D. Osborn	Frank Allen	W J. Burt	J. Larendon
16	April, 1884	Belton	H. C. Ghent.....	E. P. Becton	H. H. Darr	M Matkin	W. J. Burt	J. Larendon
17	April, 1885	Houston	E. P. Becton....	R. Rutherford ..	John C. Jones ..	S. R. Burroughs,	W. J. Burt	J. Larendon
18	April, 1886	Dallas.....	T. H. Nott.....	R. H Chilton...	J. C. Loggins....	H. L. Parsons...	*W. J. Burt	J. Larendon
19	April, 1887	Austin	S. R. Burroughs.	R. T. Knox	A M. Douglass.	A. A. Terhune..	F E. Daniel	J. Larendon
20	April, 1888	Galveston.....	J. F Y. Paine...	H. K. Leake	A. V. Doak.....	O. Eastland.....	F. E Daniel	J. Larendon
21	April, 1889	San Antonio..	R M.Swearingen	A. Sims	B F. Kingsley..	I. E Clarke	F. E. Daniel	J. Larendon
22	April, 1890	Fort Worth ...	W. P. Burts	J. C. J. King	M. D. Knox	W. W. Reeves...	F. E. Daniel	J. Larendon
23	April, 1891	Waco.....	W. H. Wilkes ...	P. C. Coleman ..	W. L. Rogers....	B. H Vaughan.	H A. West.....	J. Larendon
24	April, 1892	Tyler.....	J D. Osborn	T. J. Bell	F W. Pitts, Jr ..	T J. Bennett ...	H. A. West.....	J. Larendon

* Died July, 1886, and F. E. Daniel was appointed till next meeting.

In Memoriam.

Dr. W. J. Burt, Austin, Texas, died July 10, 1886.
Dr. H. W. Moore, Fort Worth, Texas, died September 26, 1886.
Dr. G. K. McGregor, Waco, Texas, died May 12, 1884.
Dr. J. T. Meek, Ennis, Texas, died November 11, 1886.
Dr. James Haley, Moffatt, Texas, died February 20, 1887.
Dr. J. S. Willis, Waco, Texas, died July 6, 1887.
Dr. A. Welch, ———, died September 22, 1886.
Dr. J. T. Howze, Huntsville, Texas, died August 13, 1888.
Dr. Z. W. Baker, Temple, Texas, died December 13, 1888.
Dr. A. C. White, Cuero, Texas, died December —, 1888.
Dr. F. A. Tompkins, Sandy Point, Texas, died July 26, 1888.
Dr. J. M. Ross, Brenham, Texas, died February 10, 1889.
Dr. Y. D. Harrington, Terrell, Texas, died June 9, 1889.
Dr. H. P. Downman.
Dr. J. L. Felder, Jr., Pittsburg, Texas.
Dr. W. H. Hardison, Fort Worth, Texas.
Dr. W. D. Kelley, Galveston, Texas.
Dr. Ed. Randall, Galveston, Texas.
Dr. A. R. Kilpatrick, Navasota, Texas, died September 19, 1887.
Dr. Ashbel Smith, Cedar Bayou, died January 21, 1886.
Dr. S. F. Starley, Tyler, Texas, died December 19, 1887.
Dr. J. M. Lewis, Mexia, Texas.
Dr. S. T. Lowry, San Antonio, Texas, died June 30, 1890.
Dr. W. H. Park, Tyler, Texas, died November 4, 1885.
Dr. J. B. Robertson, Goliad, Texas.
Dr. W. L. Rogers, Galveston, Texas, died April —, 1887.
Dr. R. B. White, Ennis, Texas.
Dr. J. H. Martin, Dallas, Texas, died July 18, 1887.
Dr. E. J. Carothers, San Antonio, Texas.
Dr. A. E. Carothers, San Antonio, Texas.
Dr. G. W. Tucker, Comanche, Texas.
Dr. S. A. Towsey, Galveston, Texas.
Dr. Etiene Mellou, Brownsville, Texas.
Dr. W. E. Saunders, Sherman, Texas.
Dr. Hilary Ryan.
Dr. W. A. East, Hallettsville, Texas, died December 9, 1885.

Dr. R. H. Hunter, Larissa, Texas.
Dr. L. J. Cabell, Charlotteville, Va. [Honorary.]
Dr. Willis Westmoreland, Atlanta, Ga. [Honorary.]
Dr. J. H. T. King, Laredo, Texas.
Dr. S. H Smith, Dallas, Texas.
Dr. A. A. Terhune, Jefferson, Texas.
Dr. L. J. Grayham, Henderson, Texas, died April 15, 1891.
Dr. F. T. Paine, Comanche, Texas, died April 16, 1891.
Dr. G. W. Kerr, Waelder, Texas, died April —, 1891.
Dr. T. S. Burke, Corpus Christi, Texas, died September 21, 1891.
Dr. W. T. Strain, Wills Point, Texas, died November 1, 1891.
Dr. W. W. Reeves, Austin, Texas, killed December 29, 1891.
Dr T. M. Stone, Jasper, Texas, died January 18, 1892.

The above list is all the secretary, unaided, has been able to prepare. Members in possession of facts regarding the death of any of the above, or of members not mentioned, date of death, nativity, when joined the association, etc., will confer a favor on the secretary by communicating with him, and will also render a service to the association.—EDITOR.

AUXILIARY ASSOCIATIONS IN AFFILIATION.

Austin District Medical Society.
Bell County Medical Society.
Bosque County Medical Association.
Brownsville and Matamoras Medical Association.
Central Texas Medical Association (Waco.)
Collin County Medical Society.
Dallas County Medical Association.
Ellis County Medical Association.
East Line Medical Association.
Fayette County Medical Association.
Fort Worth and Tarrant County Medical Association.
Galveston County Medical Association.
Grayson County Medical Association.
Hill County Medical Association.
Johnson County Medical Association.
Leon County Medical Association.
Long Medical Association (Bastrop county.)
North Texas Medical Association.
Rockwall and S. E. Collin County Medical Association.
Smith County Medical Society
Travis County Medical Association.
Terrell Medical Association.
Val Verde Medical Society.
Washington County Medical Association.
Waco Medical Association.
Western Texas Medical Association (San Antonio).

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